Idioms: Formally Flexible but Semantically Non-transparent

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Abstract

Contrary to popular beliefs, idioms show a high degree of formal flexibility, ranging from word-like idioms to those which are like almost regular phrases. However, we argue that their meanings are not transparent, i.e. they are non-compositional, regardless of their syntactic flexibility. In this paper, firstly, we will introduce a framework to represent their syntactic flexibility, which is developed in Chae and will observe some (2014),consequences of the framework on the lexicon and the set of rules. Secondly, there seem to be some phenomena which can only be handled under the assumption that the component parts of idioms have their own separate meanings. However, we will show that all the phenomena, focusing on the behavior of idiom-internal adjectives, can be accounted for effectively without assuming separate meanings of parts, which confirms the non-transparency of idioms.

1 Introduction

Although idioms are generally assumed to be noncompositional and, hence, non-flexible, it has been well attested that they are not fixed expressions formally. Even one of the most fixed idioms like [kick the bucket] show morphological flexibility in the behavior of the verb kick. Many other idioms show some degree of syntactic flexibility with reference to various types of syntactic behavior. Even the non-compositionality of them has been challenged, especially by those who are working under the framework of cognitive linguistics (cf. Croft & Cruse 2004: Ch. 9, and Gibbs 2007). Reflecting this trend, Wasow et al. (1983) and Nunberg et al. (1994), for example, argue that syntactic flexibility is closely related to semantic transparency. In this paper, however, we are going to show that idioms can better be analyzed as semantically non-transparent although they are formally flexible, providing further evidence for the analysis in Chae (2014).

Adopting Culicover's (2009) definition of construction,¹ Chae (2014) assumes that all and only idioms are represented as constructions. Under this view, grammar consists of three components: the set of lexical items (i.e. the lexicon), the set of rules and the set of constructions. He introduces some "notations/ conventions," which apply to regular phrase structures, to represent the restrictions operating on idioms. Employing these notations, he provides representations of various types of formal properties of idioms (in English and Korean): from the least flexible ones to the most flexible ones. However, the meanings of idioms are supposed to come from the whole idioms/constructions rather than from their component parts compositionally.

In section 2, we will introduce a framework to represent the syntactic flexibility of idioms, which is developed in Chae (2014). We will also observe some consequences of the framework on the lexicon and the set of rules. Then, in section 3, we will examine some phenomena which seem to be handled only by assuming that the component parts of idioms have their own separate meanings. It will be shown, however, that all the phenomena can be accounted for effectively without assuming

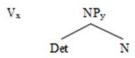
¹ The definition is as follows (Culicover 2009: 33): "A construction is a syntactically complex expression whose meaning is not entirely predictable from the meanings of its parts and the way they are combined in the structure."

separate meanings of parts. We will focus on the behavior of idiom-internal adjectives, which is the most difficult to treat properly under the assumption of semantic non-transparency of idioms.

2 Formal Flexibility

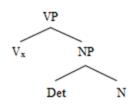
Traditionally idioms are classified into two classes: "decomposable idioms"/ "idiomatically combining expressions (ICEs)" and "nondecomposable idioms"/ "idiomatic phrases (IPs)" (Nunberg 1978, Nunberg et al. 1994, Jackendoff 1997, Sag et al. 2002, etc.). Jackendoff (1997: 168-169) analyzes the two classes as follows:

(1) A decomposable idiom: bury the hatchet





(2) A non-decomposable idiom: kick the bucket





In the former, which has the meaning of 'reconcile a disagreement' or 'settle a conflict,' the two component parts *bury* and [*the hatchet*] are assumed to have their own meanings and are separated from each other syntactically because the NP can be "moved" around. In the latter, no component parts have separate meanings and they are all connected syntactically.

Espinal & Mateu (2010: 1397), however, argue that the distinction is "not as clear-cut and uniform as has been assumed."

- (3) a. i) John laughed his head off.ii) We laughed our heads off.
 - b. Bill cried his eyes out on Wednesday, and he cried them out again on Sunday.
 - c. i) *Whose/which heart did Bill eat out?ii) *His heart, Bill ate out.

d. i) *Bill ate his [own/inner heart] out.ii) *We were laughing our [two heads] off.

The examples in (a) and (b) show ICE-like properties. On the other hand, those in (c) and (d) show their IP-like properties. In addition, Wulff (2013: 279) makes it clear that idioms are not to be classified into separate categories: "..., resulting in a 'multi-dimensional continuum' of differently formally and semantically irregular and cognitively entrenched expressions that ultimately blurs the boundaries of idiom types as described in Fillmore et al. (1988) and various other, nonconstructionist idiom typologies ..."

According to Chae (2014: 495-6), however, Espinal & Mateu's (2010) analysis is not very reasonable, either. They argue all the internal elements of idioms have metaphoric/non-literal meanings and the meanings of the whole idioms can be derived from them compositionally. First of all, it is not clear how the metaphoric meanings of the internal elements can be obtained. Hence, we will need a framework which is formal enough to be computationally useful, and which is flexible enough to handle all the (morphological and syntactic) idiosyncrasies of idioms. For this purpose, Chae (2014) provides a system for the representation of idiomatic constructions.²

Based on the fact that idiomatic expressions are typical examples showing irregularities on various levels, Chae (2014: 501) introduces four notations/ conventions to indicate lexical and formal restrictions operating on idioms:

- (4) a. <...>: the phrase is a syntactic "island" (no extraction is allowed).
 - b. /.../: the phrase cannot be further expandable by internal elements.
 - c. {...}: only the lexical items listed inside the brackets are allowed to occur.
 - d. CAPITALIZATION: lexical items in capital letters have to be inflected for their specific forms.

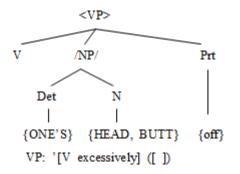
The former two are used to restrict (external and internal) syntactic behavior, and the latter two to regulate lexical and morphological behavior.

² The system was developed on the basis of English idioms. However, its main purpose was to analyze Korean data in such idiom dictionaries as No (2002) and Choi (2014). The system has been proved to be very successful in representing Korean idioms and, hence, would be effective in analyzing idioms in other languages as well.

Employing the notations in (4), Chae (2014) provides analyses of various types of idioms (in English and Korean) on the basis of their formal properties: from the least flexible ones to the most flexible ones. Please note that the notations apply to regular phrase structures. Regular properties of idioms are captured by way of these phrase structures and their irregular properties are captured with reference to the notations.

We can analyze the [V *one's head off*] idiom in (3) as follows, under our representational system.

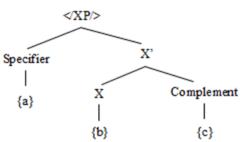
(5) A new analysis of [V one's head off]



The <...> on the VP indicates that no internal elements can be extracted out of the VP. The /.../ on the NP indicates that the node cannot be expanded further. The $\{...\}$ under lexical categories indicates that only those lexical items inside it are allowed in the position. Under the N node, two lexical items are listed, which means that any of them is allowed in that position. The position under V is open because it has no $\{...\}$. As the lexical items under the Det and N are capitalized, they are required to have specific inflectional forms in actual sentences.

Under the present framework, one of the most rigid idioms can be represented as follows (Chae 2014: 505-6):

(6)



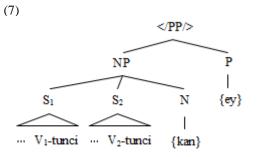
As the XP has both <...> and /.../, no elements inside it can be extracted outward, and it cannot be further expanded internally. In addition, all the

lexical items are enclosed with the notation $\{...\}$, which has only a single member. The flexibility will increase as more lexical items are capitalized, as more lexical items appear in $\{...\}$, and as <...> or /.../ disappears, eventually to become regular/non-idiomatic phrases.

We assume that the framework introduced in Chae (2014) is formal enough to be computationally useful and flexible enough to handle various types of formal properties of idioms. The behavior of idioms is regular to the extent that they are represented on phrase structures, and is irregular to the extent that their structures are regulated by the notations in (4).

The present framework has the effect of simplifying the main components of the grammar of a language, namely, the lexicon and the rule set. Firstly, the framework makes it possible to reduce the number of lexical items or their senses. For example, [ei(-ka) eps- 'be preposterous'] in Korean is a typical idiom. Its literal meaning is something like 'there is no EI.' The "word" ei, although it can be followed by the nominative marker -ka, does not have its own meaning and it can only be used as a part of the idiom. Korean dictionaries list both the idiom [ei(-ka) eps-] and the word ei as separate entries, which is necessary because an adverb like cengmal 'really' can be inserted between ei(-ka) and eps-, [ei(-ka) cengmal eps- 'be really preposterous']. Under the present approach, however, *ei* does not have to be listed as a separate entry and, hence, we can reduce the number of lexical items. We do not need the putative word because the construction representing the idiom is flexible enough to allow regular adverbs in between the two parts of the idiom, as we can see in chapter 3.

Next, let us consider how we can simplify the rule set. The expression [... V_1 -*tunci* ... V_2 -*tunci kan-ey* 'regardless of whether S_1 or S_2 '] is an idiom (No 2002: 268). It can be analyzed as follows:



PP: '[regardless of whether S1 or S2]

The idiom has not only semantic anomalies but also syntactic anomalies. No other NPs in Korean have the structure of $[S_1 S_2 N]$, in which the head noun has two sentential complements. If we are going to handle the structure with phrase structure rules, we have to posit a rule of the following: [NP \rightarrow S S N]. This NP is very special in the sense that it has a unique internal structure of $[S_1 S_2 N]$. In addition, as it can occur only before the postposition -ey, its distribution is severely limited. These facts will render the rule set very complex. Under our approach, however, the construction in (7) is listed in the set of constructions. Then, we do not have to account for the special properties of the idiom with complex phrase structure rules and unmotivated stipulations.

3 Semantic Non-transparency

We assume that idioms are syntactically flexible and semantically non-transparent. We have seen that their syntactic flexibility can be handled effectively with the framework introduced in Chae (2014). In this section, we will focus on their semantic non-transparency. This assumption is based on the observation that the component parts of idioms do not have independent meanings and, hence, that the meaning of the whole idiom cannot be obtained from their parts compositionally. We will first review the issue over the compositionality of idiomatic expressions. Then, we will observe those phenomena which have led some scholars to assume that the component parts have separate meanings. Finally, we will develop a framework in which we can handle the phenomena, especially idiom-internal modification, without assuming separate meanings of parts.

3.1 The Issue: Compositionality

There has been a controversy over the issue whether idioms conform to the principle of compositionality or not. From a non-compositional point of view, for example, Nicolas (1995) argues that the parts of an idiom do not have individual meanings. Schenk (1995) argues that there is no relation between the meaning of the whole idiom and the meanings of its parts. In addition, Culicover & Jackendoff (2005: 34) makes it clear that "there is no way to predict the meanings of ... from the words" in various types of "lexical VP idioms" (cf. Goldberg 1995). However, many other works stand on the other side: Wasow et al. (1983), Nunberg et al. (1994), Geeraerts (1995), Gibbs (1995), Sag et al. (2002), Espinal & Mateu (2010), and others.

One of the most difficult challenges of compositional approaches lies in figuring out the meanings of the parts of an idiom. For example, it is generally assumed that the meanings of *spill* and beans in the idiom [spill the beans] are 'divulge' and 'information,' respectively. However, it is unlikely that we can get at their meanings, if there are individual meanings, without consulting the meaning of the whole idiom (cf. Geeraerts 1995, Gibbs 2007: 707). Then, we do not have to worry about the meanings of individual parts from the beginning, because the reason we need to know the individual meanings is to compute the meaning of the whole idiomatic meaning. Although there are many cognitive linguistic approaches which seek to obtain the meanings of the parts on the basis of people's conceptual knowledge, they can only provide partial answers, as is hinted in Gibbs (2007: 709, 717). From a computational point of view, partial answers would be largely the same as no answers.

Non-compositional approaches may run into difficulties as well, in such cases as the following: i) when a part of the idiom is displaced from its "original" position (cf. (8d)), and ii) when a part is modified (cf. (9-10)). In these cases, it would be very difficult to compute the idiomatic meaning without recourse to the meanings of the individual parts, especially under surface-oriented frameworks (cf. Wasow et al. 1983). Without handling these cases appropriately, a noncompositional approach would not be viable.

When an internal element of an idiom is displaced from its original position, as in [<u>the</u> <u>hatchet</u> we want to bury after years of fighting], it would not be easy to capture the idiomatic meaning in surface-oriented frameworks, which do not have "underlying" structures, because parts of the idiom are separated from each other by a syntactic operation. Note that idioms are generally assumed to be word-like fixed expressions in previous non-compositional approaches. However, in our approach, the identity of the idiom can be captured with reference to the construction describing the idiom, which is in the set of constructions.

As for idiom-internal modifiers, there are three types to be considered. Firstly, adverbs can occur before verbs inside some idioms. Secondly, adjectives can occur before nouns in a few idioms and function as nominal modifiers. Thirdly, adjectives in some idioms function, surprisingly, as verbal modifiers. More surprisingly, Nicolas (1995) shows that most idiom-internal adjectives function as verbal modifiers, i.e. they have the function of modifying the whole idiom or its predicate. We have reached largely the same conclusion after examining the idioms in two Korean idiom dictionaries: No (2002) and Choi (2014).

Although English does not seem to have examples of the first type, Korean has some. This difference may be due to the word order difference between the two languages: Korean is a head-final language, while English is a head-initial language. As an adverb occurs before the string of V-NP in English, it is not clear whether it modifies V or VP. In addition, regardless of whether it modifies V or VP, the effect is the same. Even when it modifies V, the influence will go over to the whole VP because V is the head of VP. On the other hand, an adverb can occur inside the NP-V string in Korean, which clearly shows that it modifies V. As we saw above, the Korean idiom [ei(-ka) eps- 'be preposterous'] can be modified by an internal adverb such as *cengmal* 'really,' [ei(-ka) cengmal eps- 'be really preposterous'] (cf. Chae 2014: 511). When the internal modifiers are adverbs, it is not very surprising that they have the function of modifying the whole idiom, because the modified element, i.e. V, is the head of VP.

3.2 Any Compositional Phenomena?

To begin with, we want to make it clear that we cannot derive the meanings of idioms from their component parts compositionally. It is a wellknown fact that we can guess the meanings of component parts only when we know the meaning of the whole idiom (cf. Gibbs 2007: 709, 717). For example, we cannot usually figure out that the meanings of spill and beans in the idiom [spill the 'divulge' 'information,' beans] are and respectively, unless we know the meaning of the whole idiom, i.e. 'divulge information.' If it is not the case, those who are learning English would predict the meaning of the idiom correctly on the basis of the (literal) meanings of spill and beans, which is very unlikely. If we can only figure out the individual meanings with reference to the meaning of the whole idiom, we do not have to worry about the meanings of individual parts from the beginning. As we all know, we need to know the meanings of individual words to compute the meaning of the whole expression.

Despite the problems described above, there has been a tradition which takes it for granted that individual words in idioms have to have their own meanings. Nunberg et al. (1994: 500-3) is one of the forerunners: "modification, quantification, topicalization, ellipsis, and anaphora provide powerful evidence that the pieces of many idioms have identifiable meanings which interact semantically with other" (cf. Wasow et al. 1983; Croft & Cruse 2004: ch. 9, Gibbs 2007).

- (8) a. [kick the <u>filthy</u> habit]
 - b. Pat got the job by [pulling strings that weren't available to anyone else].
 - c. [touch <u>a couple of</u> nerves]
 - d. Those strings, he wouldn't pull for you.
 - e. My goose is cooked, but <u>yours</u> isn't
 - f. Although the FBI kept taps on Jane Fonda, the CIA kept them on Vanesa Redgrave.

It would be very difficult to account for these data if we do not assume that individual words in idioms have their own meanings. In (a-b), at least formally, a part of the idiom is modified. In (c), a part is quantified. In (d), a part is topicalized. In (ef), an anaphor or a deleted part refers to a part of the idiom concerned.

Under traditional approaches, we would not be able to account for the phenomena in (8) appropriately unless we assume that individual words have their own identities. Under the spirit of Chae (2014), however, we can account for the phenomena in (c-f) easily. We are assuming that only idioms are represented and all as constructions and that constructions can represent formal flexibilities of idioms. In our analysis of the idiom in (c), the position of Det/QP is open in the construction concerned.³ For the constructions in (d-f), the syntactic mechanisms involved, i.e. those responsible for figuring out the antecedents of gaps or anaphora, will identify the relevant entities. For example, [those strings] will be identified as the object NP of *pull* in (d) and *yours* will be identified as your goose in (e). Then, the idiom concerned will be identified with reference to the construction describing it, which is in the set of constructions. That is, the relevant construction will be invoked and, hence, its meaning as well, without recourse to the individual words involved.

To be more specific about the topicalized example in (8d), it can be analyzed the same way as other topicalized sentences. Just as a regular VP which has a displaced object is analyzed as VP/NP, the idiomatic VP [*pull e*], which has its own idiomatic meaning and is lacking [*those strings*], is analyzed as VP/NP. When the missing NP, i.e. the

³ If different determiners and/or quantifiers allowed in the idiom result in different meanings, such data could be handled with the mechanisms for idiom-internal adjectives in section 3.3.

NP value of the SLASH(/) feature, gets licensed, the whole idiom obtains its meaning from the construction concerned. This is not possible in previous non-compositional approaches because idioms are generally assumed to be word-like fixed expressions.

The difficulty lies in the analysis of such data as those in (8a-b). As an adjective or a relative clause modifies a noun which is a part of the idiom, there does not seem to be an easy way of accounting for the data without assuming that all the component parts of the idiom have their meanings. However, in the next section, we will see that the data can better be analyzed without such an assumption.

3.3 Idiom-internal Modification

Among the three types of idiom-internal modifiers mentioned in section 3.1, we will consider how we can account for the second and third types, i.e. the behavior of idiom-internal adjectives. We will see that the framework to be developed here can handle the phenomena without assuming separate meanings of idiom parts. This implies that idiominternal modifiers are not part of the idiom. It will be also shown that the meaning of the whole expression can be obtained compositionally from that of the idiom and that of the modifier.

With reference to such data as in (8a-b), Nicolas (1995: 233, 239-10) argues that the internal modification in V-NP idioms "is systematically interpretable as modification of the whole idiom."⁴

- (9) a. [make rapid headway] 'progress rapidly'
 - b. [be at a temporary loose end]
 - 'be unoccupied temporarily'
 - c. [pull no strings] 'do not exert influence'

In these examples all the idiom-internal adjectives are interpreted as adverbials. It seems to be true that most of the adjectives in idioms have the function of modifying the whole idiom.

However, there are some examples where the idiom-internal adjective does not have an adverbial function, including those in (8a-b).

- (10) a. [bury the <u>old/bloody/violent</u> hatchet] 'settle an old/bloody/violent conflict'
 - b. [bury the <u>ancestral</u> hatchet] 'reconcile an <u>ancestral</u> disagreement'
 - c. [spill the <u>salacious</u> beans] 'divulge the salacious information'

In all these examples, the underlined adjectives have the function of modifying some nominal elements of the meanings of the whole idiom. Please note that they do not have the following meanings:

(11) a. 'settle a conflict

- in a(n) old/bloody/violent way'
- b. 'ancestrally reconcile a disagreement'
- c. 'salaciously divulge information'

In the case of the idiom [*bury the hatchet*], the adjective *official* leads to an adverbial function: [*bury the <u>official</u> hatchet*] 'settle/reconcile a conflict/disagreement <u>officially</u>.' On the other hand, as we can see in (10a-b), the adjectives *old/bloody/ violent/ancestral* induce an adjectival function in the idiom. This shows that the function of an idiom-internal adjective is determined by the interactions between the adjective and the idiom within which the adjective is located. The issue, then, is how we can account for the adverbial and adjectival functions of idiom-internal adjectives without assuming that the component parts of an idiom have separate meanings.

As the first step to the solution, let us examine the characteristics of the idiom [bury the hatchet] more closely. When it contains an adjective inside, the adjective can be interpreted either as adjectively or as adverbially. As we can see in (10a-b), such adjectives as old, bloody, violent and ancestral lead to an adjectival reading. In [bury the old hatchet], for example, it is clear that the adjective old combines with the noun hatchet syntactically. As an adjective, it has the right formal properties to be in a position between a determiner and a noun. However, from a semantic point of view, it is not compatible with the literal meaning of *hatchet*. It is compatible only with the seemingly idiomatic meaning of *hatchet*, i.e. 'disagreement/conflict.' We have to realize here that there is a mismatch between syntactic and semantic behavior in the combination. That is, the combination is "indirect/abnormal" rather than "direct/normal." In a direct/normal combination, on the other hand, there is no such mismatch between syntactic and semantic behavior. For example, in [the tall man], the adjective tall modifies the noun *man* not only syntactically but also semantically. The (literal) meaning of man is compatible with that of *tall*.

We have to be very careful not to assume that the meaning of 'disagreement/conflict' is directly related to the *hatchet* in [*bury the hatchet*]. It comes from the argument of the meaning of the

⁴ Nicolas (1995: 244, 249) even argues that he could not find any counter-examples to the adverbial function of adjectives in his chosen corpus of fifty million words.

whole idiom 'settle/reconcile a conflict/ disagreement,' which can be represented as [SETTLE ([], CONFLICT)] formally. This becomes clear with such idioms as [kick the bucket] and [pull the wool over one's eves 'deceive one'], which can be represented as [DIE ([])] and [DECEIVE ([], ONE)], respectively. In the former, [the bucket] has no (direct) reflections on the whole meaning. In the latter, neither [the wool] nor eyes have any direct reflections on the meaning. Hence, when we say that old in [bury the old *hatchet*] is compatible with "the seemingly idiomatic meaning" of hatchet, we mean that it is compatible with the argument of the whole idiomatic meaning, i.e. CONFLICT, rather than with the idiomatic non-literal meaning of hatchet itself.

The indirect nature of the combination of idiominternal adjectives and their host nouns become more evident when the adjectives function as adverbials. In [bury the official hatchet 'settle the conflict officially'], for example, the adjective official combines with the noun hatchet syntactically.⁵ However, from a semantic point of view, it neither combines with the literal meaning of hatchet nor the assumed idiomatic meaning of hatchet 'disagreement/conflict.' As it is not compatible even with the argument of the idiomatic meaning CONFLICT, the combination becomes more different from a regular one. As it does not have any adjectival role semantically, it is "coerced" to perform an adverbial role (with the addition of a semantic adverbializer, which can be regarded as a counterpart of the formal -ly ending).⁶ Now the adjective can combine with the whole idiomatic meaning or its predicate, i.e. SETTLE.

On the basis of the observations above, we conclude that idiom-internal adjectives and their host nouns do not have direct relationships. Although their combinations are regular formally, the adjective does not combine with its host noun semantically. This means that the adjective is not part of the idiom concerned, and more importantly that the component parts of idioms do not have to have their own separate meanings.

We can conceptualize the licensing of idiominternal adjectives as follows. Formally, the adjective is licensed as far as it satisfies the morphological and distributional properties required in the position. For example, in [bury the old/official hatchet] the words old and official, as adjectives, satisfy the requirements for being in the position between a determiner and a noun. Under our framework, we just need to leave the NP dominating [the hatchet] not enclosed with /.../, to indicate that this idiom allows an internal adjective. Semantically, the adjective is licensed when it has a meaning which is compatible either with an argument of the whole idiomatic meaning or with the whole meaning or its predicate. In the former case, the adjective leads to an adjectival function. In the latter case, on the other hand, it leads to an adverbial function.

As for the semantic licensing of [bury the old hatchet], we have to check first whether the meaning of *old*, say OLD, is compatible with an argument of the whole idiomatic meaning, i.e. [SETTLE ([], CONFLICT)]. As OLD is compatible with the argument CONFLICT, the whole expression has the meaning of 'settle an old conflict.' Now, turning to the semantic licensing of [bury the official hatchet], we need to check the compatibility of OFFICIAL with CONFLICT. As this is not a normal combination, there have to be other possibilities. We are assuming that, at this point, the adjective is coerced to have an adverbial meaning. Then, we need to check whether the coerced adverbial meaning of OFFICIAL, say OFFICIALLY,⁷ is compatible with the idiomatic

⁵ Although it has an adverbial function, the word *official* in [*bury the official hatchet*] is still an adjective. It is an adjective because it shows the same syntactic distribution as regular adjectives. Notice that syntactic categories are primarily determined by syntactic distribution. All idiom-internal elements keep their formal identities in our approach, regardless of their functions.

⁶ The term "coercion" can be defined as follows (Culicover 2009: 472): "an interpretation that is added to the normal interpretation of a word as a consequence of the syntactic configuration in which it appears." Typical cases of coercion are exemplified in the sentence [*the ham sandwich over in the corner wants another coffee*], which can be paraphrased as [*the person contextually associated with a ham sandwich over in the corner wants another coffee*] (Culicover & Jackendoff 2005: 227-8; cf. Nunberg 1979,

Ward 2004). The underlined parts are coerced interpretations.

⁷ We can represent the coerced adverbial meaning of the adjective concerned with a pattern of the following (cf. footnote 10): [in the viewpoint/manner/... of being AdjP]. According to Nicolas (1995: 249), "the most commonly available kind of internal modification is ... viewpoint modification, ... about 85% ..." Then, the expression [*bury the official hatchet*] would be

meaning or its predicate, i.e. SETTLE. As this combination is fine, the whole expression can have the meaning of 'settle a conflict <u>officially</u>.' Of course, there would be cases where both types of combinations are possible. In such cases, the expressions concerned would be ambiguous between an adjectival reading and an adverbial reading.

We can see a similar phenomenon of indirect combination in some non-idiomatic phrases:⁸

(12) a. We [had a <u>quick</u> cup of coffee] before lunch.b. He had to find [a <u>fast</u> road] to get there in time.

The underlined adjectives *quick* and *fast* are positioned between a determiner and a noun and, hence, they are in the right positions. However, they have meanings which cannot be combined with the meanings of their host nouns. The expressions in the square brackets mean roughly 'drank a cup of coffee <u>quickly</u>' and 'a road where we can drive <u>fast</u>,' respectively. A cup cannot be quick and a road itself, if it is not a moving road, cannot be fast. We can see that the adjectives here are used adverbially (with an appropriate amount of coercion), just like those in idioms. From these examples of indirect combination,⁹ we can see that our assumptions about the indirect combination in idioms are not unmotivated.

In this section, we have provided a framework to account for the behavior of idiom-internal adjectives without assuming separate meanings of the parts of idioms. We have seen that the meaning of an idiom containing an internal adjective can be obtained from that of the idiom and that of the modifier compositionally. Although the combination is not direct as in regular phrases, it is not random but follows a general pattern¹⁰ of what we call "indirect combination." Hence, we can conclude that idiom-internal adjectives are not part of the idiom. That is, they should not be a part of the idiom concerned. The only thing we need to do with the idiom is to keep the NP containing the host noun not enclosed with /.../.

4 Conclusion

In this paper, we have introduced a framework to represent the syntactic flexibility of idioms. Under this framework, we have examined some phenomena which seem to be accounted for only by assuming separate meanings of the parts of idioms. However, we have shown that we can account for all the phenomena without such an assumption. This is accomplished by positing the set of constructions as a major component of grammar and by capturing the indirect nature of the combination between idiom-internal adjectives and their host idioms.

Focusing on the behavior of idiom-internal adjectives, we have conceptualized a framework to account for the indirectness in the combination of adjectives and their host idioms. By elucidating the nature of this combination, we are absolved from the almost impossible task, especially from a computational point of view, of assigning separate meanings to the component parts of idioms. Consequently, we came to prove that idioms are formally flexible and semantically non-transparent. If we could not figure out that idiom-internal modifiers are not part of idioms, we would not have reached the conclusion that idioms are not transparent/compositional.

Acknowledgments

I appreciate the comments from the reviewers of PACLIC 28 and PACLIC 29. I also express my sincere appreciations to Jeehoon Kim and the reviewers of BCGL 8 (The 8th Brussels Conference on Generative Linguistics: The Grammar of Idioms). This work was supported by the 2015 research fund of Hankuk University of Foreign Studies.

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sentence semantically well-formed and that plays a role in the sentence's truth-conditions" (cf. Jackendoff 1997).

interpreted as 'settle a conflict <u>in the viewpoint/manner</u> of being official.'

⁸ The data in (12) were brought up to me by Jeehoon Kim (p.c.).

⁹ One might assume that [*have a cup of coffee*] is a kind of idioms, probably due to the "lightness" of the verb *have*. If so, the combination of this idiom and *quick* can be accounted for with the same mechanisms as those for idioms. However, [*a road*] does not have any properties of idioms.

¹⁰ According to Culicover & Jackendoff (2005: 228), there is a consensus in the literature that coerced interpretations are "the product of auxiliary principles of interpretation ... they contribute material that makes the

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