THE SEMANTICS OF THE 'BODY PART *OFF*' CONSTRUCTION

SHIGEYASU SAWADA

Kanazawa University

This paper examines the nature of a particular syntactic configuration to be termed the body part *off* construction, which is typically exemplified by *They worked their butts off*. It will argue that the construction is not an instance of the isolated idiomatic expressions found in English, but instead falls into a larger configurational pattern that can be construed as having an intensifier reading.

The basic hypothesis is that the proper interpretation of this construction is in part determined by a pragmatically based rule of construal which language users evoke so as to interpret otherwise pragmatically inappropriate sentences, thereby overriding the constructionally entailed resultative interpretation.

Keywords: *body parts, fake resultative constructions, intensifier reading, frame-semantic knowledge*

0. Introduction

In this paper I would like to cast some light upon a very limited but intriguing range of verb phrase configurations, which have been either ignored or dismissed as marginal in the mainstream of generative theory, and investigate the constructional nature of such configurations within a cognitively-oriented framework. The configurational structure to be focused on can be schematically characterized as *V one's body part(s) off*, in which a certain specific class of verbs take as object a body part expression with a bound pronoun, immediately followed by the particle *off*. Some related structures of this pattern, indeed, have been taken up occasionally within the discussion of so-called "resultative" constructions, but to the best of my knowledge, no literature has so far brought serious attention to this structure. The aim of this paper is to unearth the interesting properties of this configuration and to claim that its proper interpretation is partly determined by our way of understanding of the real world.

The organization of this paper is as follows. Section 1 discusses the configuration *V one's body part(s) off* from a semantic as well as syntactic point of view and argues that it cannot be treated merely as a fixed expression. Section 2 reviews some of the previous studies and shows that a sufficient account for this configuration has not been provided, especially with respect to the fact that it has a special reading. Section 3 claims that a certain pragmatic rule of construal comes into play to produce the reading peculiar to this configuration. Section 4 concerns some of its related constructions. And finally, section 5 presents an attempt to generalize the construction from a broader perspective.

1. The Body Part *Off* Construction and Its Syntactic Properties

1.1. What Is the Body Part *Off* Construction?

English has a specific type of syntactic configuration, in which an “expletive” body part term appears in object position, followed by the particle *off*. The typical examples are illustrated below:

- (1) a. “... what frustrates me most is just the fact that my parents, my brother ... they *work their butts off*. They work 14 hours a day” (from *CBS 48 Hours*)
- b. “... we were prepared to *work our butts off* to get through their A-levels,” Sally’s mother said.
(from *Times*, 1996)
- c. ... his staff, who had been *working their butts off* in an exhausting stocktaking session, should have something more substantial than a pat on the back.
(from *Times*, 1996)

As is clearly observed, the italicized part comprises a specific string of the same lexical items: the verb *work* followed by the body part term *butt(s)* with a possessive pronoun coreferential with the subject and then the particle *off*. The samples of *work one's butt(s) off* are readily available in various corpuses, and in different syntactic contexts, as shown in (1). In fact, this expression is used quite colloquially, and supposedly almost all native speakers know it regardless of whether or not they actually use it.

What should be noticed here is that this configurational pattern is construed as having the effect of emphasizing the excess of an activity denoted by the head verb: in (1a), for instance, the hardworking of the

speaker's family is exaggerated. In this respect, the string of lexical items realized as *one's butts off* does not contribute any substantial meaning to the sentence; rather, it appears to be functioning simply as an intensifier complex within the overall semantic composition of the sentence. The fact that this configuration is construed as having an intensifier interpretation is obviously part of the linguistic knowledge that speakers of English have acquired, perhaps, without explicit instruction. In what follows, we will discuss how this knowledge is characterized in linguistic theory.

To most English speakers, the VP configuration *work one's butt(s) off* seems to sound like an idiom (or fixed) expression. Therefore, as far as we see in the examples cited above, it might be plausible to specify it in the "mental" lexicon as an instance of the verb phrase idioms scattered around in English, such as *kick the bucket* or *let the cat out of the bag*. This would be called the individual registration approach. On this approach, this expression is, as it were, a "learned" chunk of English. A closer examination, however, reveals that, unlike such frozen idioms, this VP expression does not designate its head verb as *work*, as is shown in (2):

- (2) a. "... I've skied my butt off," said Moe, a square-jawed, square-talking Alaskan. (*TIME*, Feb. 28, 1994)
 b. They danced their butts off at the party.

As these cases show, the postverbal sequence *one's butt(s) off*, even if combined with other verbs, can be interpreted as exaggerating the amount of an activity denoted by the verb. The traditional treatment of the expressions like those in (2) would be to dismiss them as an analogy to the VP configuration in (1). But what is really needed is a systematic account for the basic mechanism on which such an "analogical" process takes place.

The expressions in (2) conjure up a conceptual scene in which the activity denoted is understood as somewhat laborious. In this respect, they certainly have something to do with the meaning of the verb *work*. However, the possibility of combinatorial variation exemplified by (2) suggests the inadequacy of the individual registration approach: it is implausible to treat the form *work one's butt(s) off* simply as a fixed expression.

It might seem that it is the sequence of *one's butt(s) off* in itself, not the VP configuration, that is construed as having the effect of exaggerating a verb's activity. In point of fact, the notion of exaggeration (or

intensification) is in many cases expressed as an adverbial expression like *very much* and *a lot*. Thus, if its function is really adverbial, then this truncated portion would be better characterized as an idiom that serves as an intensifying adverb. There is, however, evidence that the head verb should also be taken into consideration. In the cases so far illustrated, the body part is fixed to the same word *butt(s)*, with a slight coreferential modification on the bound pronoun. On a little wider survey, however, it turns out that the body part term is not invariably designated as *butt*. We can find a variety of body part expressions that apparently enter into the same pattern, some of which are illustrated below:

- (3) a. He talked his head off (in the class reunion).
 b. She laughed her head off (at the party).
- (4) a. She sewed her fingers off (in the factory).
 b. She played her fingers off (on the piano).¹

Each of the sentences in (3) and (4) is configurationally parallel to those in (1) and all these sentences are immediately interpreted as having an intensifier reading. Therefore, we can presume that what is responsible for the emergence of an intensifier reading is a more schematic configurational pattern including both a head verb and a body part expression.

As we will see in section 3, those expressions that we are discussing have been called "fake object constructions," because the argument in object position allegedly does not bear any semantic relation to the main verb. In the case under discussion, however, we notice that the choice of a host verb changes in accord with the body part expression. There seems to be some sort of conceptual association between the action denoted by the verb and the body part in object position. As illustrated in (3), the part *head off* occurs with verbs of voice emission like *talk* and *laugh*. By contrast, the part *fingers off* goes well, as seen in (4), with verbs involving finger motion like *sew* and *play* (as a musical activity in this case). Thus, we cannot say the body part argument

¹ The PPs in brackets are used here to provide a possible context. This expression is most felicitously used to focus on the excess of an activity in itself. Thus, most speakers find less acceptable the sentences like *She talked her head off about history*, where an extra adjunct somewhat distracts the focus on the excessive activity.

bears no relation whatever to the host verb in this configurational pattern. Rather, we can claim that only if the body part nominal is conceptually associated with the activity denoted by the head verb can the sentence be construed as having an intensifier reading. Thus the sentence like "she laughed her fingers off" makes no sense.

Clearly it is not possible for just any verb to fit in with this configuration as a head verb. There is an interesting constraint on the semantic nature of the host verb. As we noted, the verbs *talk* and *laugh* most preferably occur with *head off*. However, even if there are verbs that describe similar events like talking or laughing, they are not always acceptable in this configuration. Consider the contrast illustrated in (5):

- (5) a. Susan talked/*said/*told her head off (at the party).
- b. Lora laughed/*ridiculed her head off (on the phone).

The contrast shown in (5) suggests that the verbs involving a result in the core of their lexical meaning cannot appear in this configuration. The verbs like *talk* and *laugh* express no more than an agentive activity, whereas the other verbs *say/tell* and *ridicule* convey some kind of result or intention, i.e. the attempted or fulfilled communication in the former, and the intention to despise in the latter.

Some native speakers seem less receptive to a fairly liberal combination between the head verb and the body part. Such speakers report assertively that *one's head off* sounds good only when it occurs with *talk* and *laugh*, and yet they still find it acceptable when it is used with other verbs of voice emission, such as *shout* and *whistle* (probably a big whistle in this case).

Although there are such conservative speakers, we can notice a certain degree of productivity with respect to this configurational pattern. The following examples are judged more or less acceptable by speakers that I have checked with:

- (6) a. John ate his head off at the party.
- b. She played her head off (on the piano).
- c. He studied his head off (about the financial law).
- (7) a. She danced her feet off (at the party last night).
- b. He pitched his hand off (in his debut game).

Although acceptability varies among these cases, they are all immediately construed as exaggerating the excess of the activity. A noteworthy thing is that these cases are not incomprehensible even to conservative speakers. They show some amount of resistance to the ex-

pressions like (6) and (7), but, if pressed, they immediately interpret them as exhibiting an intensifier reading. In passing, liberal speakers do not allow an unlimited range of expressions; those who allow (6) and (7) still find the sentence like "He learned his head off" unacceptable, because it violates the semantic constraint on the verb type.

To summarize briefly, the origin of the intensifier reading typically observed in (1) cannot be plausibly attributed to the particularity of the verb nor of the body part nominal. Rather it comes from the specific VP configuration headed by a verb expressing an agentive activity. As far as a configurational pattern is observed, some degree of productivity is recognized. Therefore it is implausible to identify each of the examples shown above as a fixed expression. A more general account is called for to capture the systematic pattern. We assume here that there is a level at which this configurational pattern is represented as $[NP_i V [NP \text{ one}_i\text{'s body part}] \text{ off}]$, on which the intensifier reading is somehow construed. This configuration is hereafter referred to as the *body part off construction*, and the postverbal complex is, just for reference purpose, called the *body part off sequence*.

1.2. The Syntactic Properties of the Body Part *Off* Construction

In this section, we take a look at the syntactic status of the construction in some detail and see that its configuration is strictly fixed syntactically. First of all, the body part *off* sequence cannot be syntactically separated from the host verb:

- (8) a. *Their butts off they worked (when they were young).
 b. *Her head off she laughed (at the party).

The body part followed by the particle *off* occurs only in the postverbal position; it cannot be moved to the sentence initial position, or for that matter to any other positions.

The two elements that constitute the body part *off* sequence are both necessary and their order is completely fixed for an intensifier interpretation to emerge. Specifically, the particle *off* cannot be omitted, as shown in (9); nor can the order be reversed, as seen in (10):

- (9) a. *They worked their butts (when they were young).
 b. *She laughed her head (at the party).
 (10) a. *They worked off their butts (when they were young).
 b. *She laughed off her head (at the party).

The body part expression is allowed to occur only when it accompanies the particle *off*. And when the particle *off* is placed adjacent to the

head verb, the intensifier reading is lost. There are some speakers who report (10a) to be acceptable in the sense of a literal causative sense.

Although the body part argument cannot occur in object position by itself, there is evidence that it serves as a syntactic object, which can be illustrated by the following sentences:

- (11) a. *They worked this job their butts off.
- b. *She laughed at the story her head off.
- (12) a. *They worked recklessly their butts off.
- b. *She laughed yesterday her head off.

As shown by (11), the other syntactic object cannot occur before the body part nominal, and moreover the genuine adverb also cannot be inserted, as in (12). These facts suggest that in the body part *off* construction, the body part usurps the status of object position syntactically.

In this context, it is worth noting that the body part *off* construction cannot be passivized, as illustrated in (13):

- (13) a. *Their butts were worked off.
- b. *Her head was laughed off.

If the body part expression is in object position, as claimed here, then passivization should be expected here. So one might argue that the body part argument is not in object position. However, the unacceptability of (13) does not undermine our argument that the body part occupies the direct object position. Rather, it shows that the intensifier reading crucially depends on the strict configuration. The same thing can be said of other idiomatic expressions. As exemplified by (14), most, though not all, idiomatic expressions cannot be construed as such when they are passivized:

- (14) a. *The breeze was shot by the coal miners.
- b. *The bucket was kicked by John.

(Jackendoff (1997b: 166))

Therefore, what (13) shows is that the configuration must be preserved for an intensifier reading. A piece of evidence for this is that some speakers reported that (13a) might be possible in the sense of a physical severance, just as was the case with (10a).

What is naturally concluded from all these syntactic facts is that the intensifier reading is obtained only when the configurational pattern represented as [V [one's body part(s)] off] is preserved; any change in this integrity leads either to the loss of the intensifier reading, in the

case where a causative reading is possible, or else to unacceptability.

1.3. Comparison with the Fake Object Construction

As suggested above, the body part *off* construction is similar to so-called fake object cases. Thus it might seem that the intensifier reading of the body part *off* construction would stem from the intransitive status of the host verb. However, this is clearly wrong. Compare the following two sentences:

- (15) a. They laughed the actor off the stage.
b. They laughed their heads off.

The verb *laugh* is intrinsically an intransitive verb. Thus the post-verbal NP arguments in (15) are both regarded as a fake object. But the reading is quite different.

It would be in order here to make explicit what the term “reading” means. Let us consider how the ordinary fake object case (15a) can be paraphrased. There are at least two possibilities shown in (16):

- (16) a. “they made the actor to move off the stage by laughing”
b. “their laughing resulted in the actor moving off the stage”

The paraphrase (a) indicates the sense of agentive causation, whereas (b) shows the sense of resulting-event causation.² Both of them imply that the situation in which the actor moved off of the stage was realized as a result of the activity described by the head verb. The case (15a) is said to have a resultative reading in this regard. It cannot be felicitously used in a context where the actor didn’t actually go away. However, (15b) does not have such a reading. It is inappropriate to paraphrase (15b), say, as “their laughing resulted in their heads coming off.” It is just construed as exaggerating the excess of an activity. In the case of (15a), their laughter might have been sufficiently big so as to discourage the actor’s intention to continue his performance on the stage, but such an interpretation is not the one inferred from an

² The paraphrase like (16a) is found in Jackendoff (1990), while the one like (16b) is practiced by Talmy (forthcoming: Ch. 8). At the deepest conceptualization, the notion of causation is viewed as a relation between two events. Thus (16a) should be better understood as a combination of a basic causation with agentivity. See Talmy (forthcoming) for a related discussion.

interaction with the construction. The contrast in (15) shows that the intransitive status of the host verb does not play a crucial role in the existence of an intensifier reading in the body part *off* construction.

There is further evidence that the transitive/intransitive distinction does not play a defining role in characterizing the body part *off* construction. Some classes of transitive verbs do have an intensifier reading of the same type when they enter into the appropriate syntactic configuration. Consider the following sentences:

- (17) a. The dog wagged its tail (when he found his master).
b. The cat scratched its paws (on the pillar).

The verbs *wag* and *scratch* are obviously transitive verbs. However, given the syntactic context for the body part *off* construction, the intensifier reading emerges, as illustrated in (18):

- (18) a. The dog wagged its tail off (when he found his master).
b. The cat scratched its paws off (on the pillar).

The sentence (18a) means that the dog waved its tail violently probably out of joy; and (18b) preferably means the activity of violent scratching.

The contrast between (17) and (18) suggests that the intensifier reading can be obtained even in the case of transitive verbs, provided that the constructional context is properly aligned. Therefore, the body part *off* construction is overlapped, but cannot be identified, with the class of fake object resultative construction.

As was suggested in section 1.2, passivization is impossible in the case of body part *off* construction. But the sentences in (18) can be passivized, as illustrated in (19):

- (19) a. The dog's tail was wagged off.
b. The cat's paws were scratched off on the pillar.

The important thing to notice here is that the sentences in (19) do not have an intensifier reading; they are acceptable only when they are interpreted as a causative reading.

As also mentioned in section 1.2, the particle *off* cannot be adjacent to the head verb in the body part *off* construction. In the case where a transitive verb occurs, however, the outcome is still acceptable, but again what we have is the sense of literal causative meaning:

- (20) a. The dog wagged off its tail.
b. The cat scratched off its paws on the pillar.

The sentences in (20) are only to be interpreted as causing the object argument to be taken off. These facts support our claim that if the

construction is deformed, the intensifier reading is lost, yielding ungrammatical sentences when the true resultative reading is impossible.

There is one more thing we need to discuss with respect to the configurational pattern: the particle *off* is designated in this construction. To see the nature of this satellite element *off*, consider the following sentences:

- (21) a. Susan scraped her fingernails off.
b. John cut his fingers off.

Clearly the configurational pattern here is parallel to that of the body part *off* construction. In these cases, the particle *off* specifies a path argument along which the object argument moves. In other words, the particle *off* implicitly suggests a larger body part from which the body part in object position is taken. It is thus redundant to say "to cut one's body part off the whole body." I assume that a larger body part is implicit in the body part *off* construction, too.

To make the point clearer, compare (21) with (22), in which the verb takes the object NP and the full directional phrase as its arguments:

- (22) a. George scraped the putty off the molding.
b. Bill worked the handle off the bicycle.

Notice that in (22) there is an inherent or functional part-whole relationship between the object argument and the object of the PP argument. Applying this to the body part *off* construction, we can represent its configuration more elaborately as (23):

- (23) [NP_i V [NP one_i's body part] [PP off [NP $\emptyset$]]]

The symbol $\emptyset$ is used here to designate a larger body part that conceptually as well as physically includes the overt body part. Here the inherent part-whole relation is taken to hold between the body part and the entity potentially referred to by $\emptyset$.

2. The Body Part *Off* Construction in Previous Literature

As mentioned in the introduction, the body part *off* construction has been occasionally touched on in some previous studies within the context of the resultative construction. We review some of them briefly.

Rapoport (1993) contrasts the sentence "I laughed my head off" with the ungrammatical "I appeared my head off," in order to claim that only the unergative can enter into a resultative construction. From the present point of view, his argument is in a sense misleading because the body part *off* construction does not have a true resultative reading.

Yet what is suggested by his argument is that the body part *off* construction can fall into the class of resultative constructions, though it may not be a typical case. We adopt this position here.

Tenny (1994) presents the following set of sentences, one of which is clearly an example of the body part *off* construction:

- (24) a. John walked his feet off in/for three hours.
- b. I cried my eyes out in/for three hours.
- c. Maria worked her hands to the bone in/for three hours.

There is more to say about (24b, c) in section 4.1, so for the time being we stick to the case (24a). Based on the fact that the ambiguity in her "delimitedness" is observed in (24), Tenny claims that the "expletive body part" acts as an optional "measuring" argument. This means that she assumes the body part argument in (24) is in direct object position. What is of more interest here is that Tenny observes that the following sentences are disambiguated, though they have fake object expressions:

- (25) a. I danced myself tired in/*for three hours.
- b. I laughed myself sick in/*for three hours.
- c. I shouted myself hoarse in/?for three hours.³

Tenny does not provide any specific account for this fact. However, the issue is made clear by taking the difference in reading into consideration. The sentences in (25) cannot be felicitously used when the resultative state was not achieved. So (25a) has to mean that I became tired as a result of dancing. On the contrary, sentences having an intensifier reading are not necessarily understood as delimited, because intensification just exaggerates the excessive activity. Therefore, what remains to be answered is why the cases in (25) as opposed to (24a) cannot be construed as having an intensifier reading, despite their similar syntactic status. This issue will become clear as we proceed below.

Levin and Rappaport Hovav (1995) do not provide any example that can be regarded as an instance of the body part *off* construction, but they explicitly claim that the construction with an unsubcategorized body part argument is an instance of the resultative construction. Moreover, they classify the class of fake object resultative constructions into three types and put the constructions involving the body part with

³ The judgement is Tenny's (1994).

a bound pronoun into a third type. They claim that the construction of the third type is intermediate between the first type in which the postverbal NP is reflexive, just like those in (24), and the second type in which the postverbal NP is a real noun, just as in *The dog barked him awake*. Although they correctly noted that the verb that enters into the fake object resultative is unergative, i.e. verbs of activity in this analysis, they did not make a remark on the special reading of their third type.

Most researchers do not distinguish between the class of resultative constructions with a directional PP and the one with an adjective. In light of this, Goldberg (1994) assumes the class of resultative constructions to be a metaphorical extension of the caused motion construction and limits her discussion on the resultative construction to the construction schematically represented as [NP V NP Adj]. Thus, in her framework the class of constructions with a directional PP, like the body part *off* construction, is defined to be the caused motion construction, which designates the PP as an argument. The major reason for this would be that a path argument is not likely to be taken to refer to a state.⁴

By contrast, Jackendoff (1990: 233–234) has explicitly brought up the construction with a directional PP, and proposed to call it the “spatial resultatives.” His examples are given in (26):

- (26) a. Bill pushed the piano into the orchestra pit.
- b. Beth wiggled the tooth out of her mouth.
- c. The critics laughed the show out of the town.
- d. Harry sneezed his handkerchief right across the room.

In Jackendoff's theory, the conceptual structure is for the most part established in terms of entailment relation. Since the sentence (26a), for example, entails that the piano is in the orchestra pit, the PP in (26) can be understood as corresponding to the end point of a path in conceptual structure. Because of this characteristic, each of the sentences in (26) can be subsumed under the class of resultative construction. Notice that all the PPs in (26) specify a boundary-crossing path that is

⁴ But in fact, Goldberg mentions that “the term resultatives covers expressions which encode a resultant state with a PP as well.” (1994: 181) Thus, it would be all right in her approach to view the body part *off* construction as a specific case of the resultative construction.

conceived of as a change of state.⁵ So I assume that for constructions with a directional PP to be a resultative construction, the PP has to be conceptualized as referring to a change of state. Thus sentences involving the PP like *along*, *from*, and *toward NP* are not considered members of the resultative construction; they are classified as a genuine instance of the caused motion construction in the sense of Goldberg.⁶ On the other hand, sentences involving the particle *off* can be understood as referring to a change of state because of its deprivative meaning.

We have reviewed some of the previous studies and seen that the body part *off* construction can be viewed as an instance of the resultative construction. So the problem has become clear: why is the resultative reading not entailed in the case of the body part *off* construction? A simple way to sidestep this issue is to directly assign an intensifier reading to this construction. Jackendoff (1997a: 551–554) has provided a brief analysis of this sort, in which it is argued the syntactic configuration shown in (27a) is put in correspondence with the semantic representation roughly shown in (27b), in accordance with his Conceptual Semantics:

- (27) a. NP_i [VP V [NP one_i's head] [PP off]]
 b. NP_i V intensely

In his idea, just as conventional idioms like *kick the bucket* must be represented with their specified meaning, (27a) can be registered in the lexicon with its semantic specification. Since the difference in reading is properly distinguished at a conceptual level, this kind of treatment may be all right in Jackendoff's theory. On the present approach, however, his analysis is in any event unsatisfactory in the following three respects. First, it does not explain at all the productivity of the body part *off* construction. Second, it is far from clear why the body part has to be designated. And third, it does not account for the exclusive use of *off* as a direction PP. That is, in Jackendoff's treatment, there is no systematic explanation for why the configuration in this very

⁵ See Slobin (1997) for the notion of boundary-crossing.

⁶ Jackendoff wouldn't acknowledge this distinction, because he views the sentence *Harry rolled himself along the carpet* as a resultative construction. (1990: 234) We do not share this point under the present analysis.

form is invariably construed as having an intensifier reading. A principled explanation for it will be pursued in the next section.

3. Pragmatic Relevance to the Intensifier Reading

To bring out the point, let us consider what would happen if the body part *off* construction were to be construed the same way as other resultative cases. Interpreting it as a true resultative construction would lead us to acknowledge an abnormal, weird situation such that an activity of laughing or talking could cause an event of one's head coming off. This acknowledgement goes against our understanding of such activities. So when we hear someone utter a statement like "John laughed his head off," we get in an interpretive conflict. The constructional requirement urges us to interpret it as a resultative case, while our common sense requires us to interpret it in a different way. To solve this conflict, a certain process of reconciliation comes into play. In the case of the body part *off* construction, our interpretive mechanism shrinks just a little from, or balks at the reading of the true resultative construction. That is, we understand the speaker to be implying that John laughed to the point at which he could not laugh any more by saying such a weird situation that his head comes off. Here the state of his head coming off is alluded to as describing the ultimate end point of the activity. Put differently, we tend to measure the amount of an activity on a scale of a fictitious path whose end point can be understood as the state where the activity cannot fail to terminate, i.e. the disintegration of a body part relevant to that activity.

Along the line of this intuition, the semantic interpretation of a body part *off* construction could be roughly represented not as (28a), the true resultative reading, but as (28b), an altered version of it:

- (28) a. [EVENT NP_i V] RESULT-IN [EVENT one_i's body part coming off]
 b. [EVENT NP_i V] GO-AS-FAR-AS [EVENT one_i's body part may come off]

The predicates RESULT-IN and GO-AS-FAR-AS are used here to indicate an abstract relation between two events, so they do not correspond to actual English words. The semantic representation (28b) may look very clumsy, but what it is intended to mean is that the event of activity in the first argument does not reach the end point represented in the second argument. That is, the postverbal sequence

corresponds to the degree phrase, not to the resultative state. I assume that, faced with the body part *off* construction, a certain cognitive mechanism coerces the reading of (28a) into that of (28b), in which the resultative clause has been replaced by the degree clause.

Notice that this last-minute alternation in interpretation is triggered when a normal interpretation clashes with our world knowledge. This is reminiscent of the rule of construal that Jackendoff (1990, 1997b) proposes for an interpretation of Numberg's (1979) classic case in a restaurant situation:

(29) The ham sandwich in the corner wants some more coffee.

To explain how (29) is interpreted, Jackendoff proposes a rule of construal that alters the referent of "the ham sandwich" into the one referring to the person who ordered it. The rule of construal for this case is invoked so as to avoid the acknowledgement of a surreal situation in which the food ordered something. Here our interpretive mechanism manages to find a way out of the conflict, based on our world knowledge that it is a sentient entity, not a thing, that has the ability to want something. Thus we can just as well see that the proper interpretation is implemented by virtue of our way of understanding the real world.

Let us work out the process of the body part *off* construction in more detail. To explicate our relevant world knowledge, we assume that there is a piece of world knowledge which can be roughly stated in (30):

(30) Any part of the living (human) body cannot be taken off without losing its integrity and function.

This knowledge, which would be called the "knowledge of body part integrity," clearly constitutes part of the knowledge that any member of human species is supposed to share, since they would otherwise be unable to survive in the real world. Thus, (30) can be compared to other fragments of our world knowledge, such as "dead men never come alive," or "water flows from high to low." Recall that when some external force is exerted, then we are able to accept a situation where a body part indeed comes off, which is exemplified by (21). So the qualification like "as a result of an ordinary activity" may need to be added.

It is reasonable to assume that part of the world knowledge stated in (30) frames our way of understanding of what is uttered or communicated in a real situation. Thus we are disposed to construe any utterances in such a way that they accord with our world knowledge. But when a conflict is perceived, our interpretive mechanism tries to resolve

the conflict by seeking some sort of repair, not by throwing away the halted interpretation. Accordingly, in the body part *off* construction, a reconciliatory process comes into play so as to accommodate the “weird” sense into its semantic composition. The parts that pertain to the construction can be stated informally like in (31):

(31) Interpretive mechanism

(i) Avoid an interpretation against the knowledge of body part integrity.

(ii) Seek another way of interpretation, if available.

If we are in a context in which we accept an abnormal situation, say, in a Disney-like movie, then this mechanism can easily be cancelled. In the case where (31i) is operative, but (31ii) is unsuccessful, the interpretative mechanism fails to yield meaningful sentences.

As pointed above, in the case of the body part *off* construction, there is an option of interpreting the body part *off* sequence as a degree clause, which can be informally stated like (32):

(32) Rule of construal for intensification

Interpret the postverbal sequence as an intensifying complex. This rule of construal is invoked only when the following two conditions are met. First, it is necessary that the constructional entailment run counter to our pragmatic knowledge stated in (30). Second, it can also be understood as describing the end point state beyond which an activity cannot proceed any further. In this respect, (32) is regarded as a pragmatically based rule of construal.⁷

Let us consider why the body part *off* sequence can be integrated as an intensifying clause into the semantic composition of the whole sentence. Recall that only the class of verbs of activity can occur in the body part *off* construction. The verb of activity can be defined as not having an inherent termination in its lexical meaning. However, at conceptual level we do not understand an activity performed by a human being as continuing forever in the actual situation. Therefore, there is a cognitive tendency for a sentence involving an activity verb to

⁷ The emergence of an intensifier reading may be subsumed under a larger conceptual process that has been called “semantic resolution,” if we posit the body part *off* construction as an instance of a closed-class complex. See Talmy (forthcoming: Ch. 1) and Goldberg (1994).

incorporate what can count as a linguistic unit signaling a conceptual termination into its sentence interpretation. To use Tenny's (1994) terminology, the amount of an activity in the body part *off* construction tends to be measured out by a conceptual path along which the amount of the activity is accumulated. And if the end of such a path is understood as the state in which the activity cannot go any further, it is construed as an intensification.

The intensifier interpretation crucially depends on the degree to which we conceptualize a situation as abnormal. Thus the following auxiliary principle can be added:

(33) Intensity Correlation Principle

The degree of abnormality correlates with the degree of intensity.

This ensures that the more abnormal situation is referred to, the higher intensity is implied. This principle allows for the case where the intensifier reading is to some extent compatible with the resultative reading. In that case, the intensifier reading can be felt to be a superimposition onto the resultative reading of the fake object construction. But in the case of the body part *off* construction, the constructionally entailed state always refers to the situation that runs counter to the knowledge of body part integrity; hence we always have an intensifier reading.

Before going into the next section, I would like to discuss the issue on the variation of acceptability noted in section 1. With respect to this variability, we can assume that there is a hierarchy of schematization, which could be diagrammed roughly as (34):

(34) Level of Schematization

- i. NP_i [VP talk/laugh [one_i's head(s) off $\emptyset$]]
- ii. NP_i [VP V [one_i's head(s) off $\emptyset$]]
- iii. NP_i [VP V [one_i's body part(s) off $\emptyset$]]

These three levels can be taken to correspond to the level of knowledge on which language users interpret the body part *off* construction. Level (i) is the most specified level, which in fact Jackendoff (1997a) proposes to put in correspondence with its intensifier reading. To those who get access to their knowledge of the construction at this level, the body part *off* construction sounds like a fixed expression.

Level (ii) indicates a one-step abstract stage, where the part *one's head off* is dissociated from the particularity of verbs. Those who get access to their knowledge at this level allow the *head off* sequence to occur with a fairly large number of verbs. Such speakers would feel as

if the body part *off* sequence in itself is functioning as an adverbial intensifier.

Level (iii) may be a theoretical construct, which is reached by the process of generalization from the systematic pattern on the body part *off* construction. I assume that if one conceives a connection among various instantiations of the body part *off* construction, one is getting access to the knowledge at this level. Alternatively, we could say that when one realizes the connection, one has acquired the knowledge of the construction represented at this level. We will attempt to generalize (34iii) one more step in section 5.

4. Other Related Constructions

I have proposed to derive the intensifier reading, not from the body part *off* construction itself, but from the interactive mechanism between the construction and the way we understand the world. If this proposal is on the right track, an intensifier reading of the same type will be expected to emerge in other similar constructions in which the structurally entailed resultative meaning is not compatible with our world knowledge. In this section we are concerned with some other related constructions—the ones systematically diverted from the body part *off* construction.

4.1. Body Part-Involving Constructions with a Different PP

There are at least two types of related expressions with a body part as a fake object. The first type has 'to NP' as a directional PP. Here are some typical examples:

- (35) a. Amy walked her feet to pieces.

(Jackendoff (1990: 227))

- b. ... you need not stitch your poor fingers to the bone

(Levin and Rappaport Hovav (1995: 37))

These are evidently not instances of the body part *off* construction. But they exhibit an intensifier reading of the same type. The reason is clear. In (35a), for example, the end point state is obviously against our world knowledge, namely, her feet being in pieces as a result of walking. It is clear that the account we have just provided can apply to these cases.

The second type is the one in which the particle *out* is used. Some examples of this type are given below:

- (36) a. Sylvester cried his eyes out.
 (Levin and Rappaport Hovav (1995: 36))
 b. She sang her heart out.
 c. He worked his guts out.

To see the intensity of the body part *out* construction, it would be useful to compare (36a) with a similar fake object construction *to cry one's eyes red*. Most speakers feel a difference in intensity between these two cases. They report the intensity in crying to be much higher in the case of (36a). The Intensity Correlation Principle is responsible for such a difference in intensity. That is, the situation of one's eyes coming out is much more abnormal than that of one's eyes becoming red.⁸ Recall the difference between (24) and (25) noted in section 2. Generally speaking, the adjective resultative constructions can hardly be construed as having an intensifier reading, largely because it is a rare case for an adjective to refer to the absurd end point state of something. But in fact Goldberg (1994: 184) has noted, though in a different context, that fake object cases are often used as a hyperbole, citing the well-known example: *The joggers ran the pavement thin*. The reason that this sentence sounds hyperbolic, i.e. an intensifier reading, is that the situation of the pavement becoming thin as a result of running is a rare thing in its own right.

We can also recognize the conceptual relation between the head verb and the body part in (36). The expression *one's eyes* is comparable to "tears" in (36a); *one's heart* to "emotion" in (36b); and *one's guts* to "spirits" in (36c). So the *eyes out* sequence is most likely combined with verbs of "crying," such as *weep* and *sob*, but not *look*, even though *look* implies an activity involving eyes.⁹

⁸ There are some speakers who do not accept the expression *cry one's eyes red*, because the constructionally entailed state is a natural result; thus it sounds redundant to such speakers.

⁹ Some speaker reported that the expression *gawk one's eyes out* is acceptable. A contrast similar to the one noted between (34i) and (34ii) seems to be observed in this body part *out* construction.

In a similar vein, the *heart out* sequence in (36b) is most congenial with verbs of emotional expression, as exemplified by the sentence *She played her heart out on the piano in her solo concert*. Notice that whatever the referent of the body part, abstract or concrete, it seems to be conceptualized as “going out of the body.” This is why the particle *out* is used here.

These cases are to a certain degree conventionalized, but what they all have in common is that the constructionally entailed resultative state leads to the violation of the knowledge of body part integrity.

4.2. From the “Body Part” to the Inalienable Part

As is clear throughout the present discussion, the notion of body part plays a crucial role in interpreting the body part *off* construction and its related ones. What is really essential with respect to the notion of body part employed here is that it does not refer to any entity that exists independently of our conceptualization. A body part is an entity that we conceptualize to be functionally as well as inherently attached to the whole body. Traditionally, this concept has been termed the relation of inalienable possession.

It has been sometimes argued that the inalienable possession holds in the class of wearing things, because they are liable to be conceptualized as being functionally, though not inherently, attached to the body. In this light, consider the following sentences:

- (37) a. She danced *her shoes off* at the party.
- b. In winter they would often skate *their shoes off* in the lake.

Since one’s shoes coming off is not an unusual situation, they can be construed as having a resultative reading. But some speakers report that an intensifier reading is preferred in (37). This case is also considered an extended instantiation of the body part *off* construction.

There is another related, but distinct construction type in which the pragmatic principle of the same type seems to be at work. If wearing things can be conceptualized as an extension of the body part, then it is clear that the idiomatic expressions like (38) are also coming into scope:

- (38) a. ... these creatures can beat *the pants off* us
- b. They scared *the pants off* us.

Although the main verbs are transitive, these idiomatic expressions have an intensifier reading of the same type.

It seems that what is operative behind these expressions is a certain psychological tendency to exaggerate the degree of the result involved in the meaning of the head verb by specifically mentioning a "weird" scene.

5. From a Specific Construction to a More General One

We have so far seen that the proper interpretation of the body part *off* construction is established in terms of the pragmatic rule of construal roughly stated in (32), assuming that the construction is an instance of the spatial resultative constructions.

To make the systematic pattern clear, let us summarize the characteristics of the body part *off* construction. The following characteristics are noted in this study:

- (39) a. The part of resultative predicate is designated as *off*.
- b. The object argument is a fake object that is not subcategorized by the head verb.
- c. The relation of inalienable possession holds between the body part and [$\emptyset$].
- d. There is a conceptual relation between an activity described by the head verb and the body part that the verb takes as object.
- e. The constructional entailment denotes the end point beyond which an activity denoted by the head verb cannot proceed any further.

All of these characteristics can be regarded as the conditions on the typical body part *off* construction. As we have so far observed, there are cases in which one of these conditions is somewhat loosened: the condition (a) for the *out* case; (b) for the *wag* case; and (c) for the *shoes* case.

Now I would like to generalize the pattern found in the body part *off* construction one step further. Consider the following examples.

- (40) a. John played the strings off his guitar (at the concert).
- b. He rode the spokes off his bicycle (yesterday).
- c. The policeman shot { the barrel/the hammer } off the gun.
- d. They rowed the paint off their paddles.
- e. He drove the treads off his tires.

These sentences are interpreted as having a resultative reading: in

(40a), for example, John played his guitar and its strings were taken off. Interestingly, however, each of them can also be interpreted as having an intensifier reading. That is, they are acceptable, even preferable, in a context where the resultative state is not achieved. The existence of an intensifier reading can be partly borne out by the following sentences:

- (41) a. John played the strings off his guitar to the end of the concert.
- b. John played the strings off his guitar for 3 hours.

These sentences are only possible in the sense of intensification.

Let us compare the pattern observed in (40) with the body part *off* construction in reference to the conditions brought forth in (39). First, the path argument is designated by the same particle, except that in (40) *off* takes a full NP. Second, the object argument in (40) is a fake object and thus it cannot occur by itself, as illustrated by (42):

- (42) a. *John played the strings.
- b. *He rode the spikes.

What is interesting here is that the true object seems to appear in the PP, except for (40e), as shown in (43):¹⁰

- (43) a. John played his guitar.
- b. He rode his bicycle.

The examples in (43) show that the object arguments of the preposition *off* in (40) can occur in the direct object position. Thus, the sentences in (40) have an interesting syntactic alternation.¹¹

¹⁰ All the verbs in (40) are transitive in this regard, but there is an intransitive variant, which is provided in Levin and Rappaport Hovav (1995). Furthermore, they have noted the following contrast:

- (i) a. We ran the soles off our shoes.
- b. *We ran the soles off our shoes into town.

The case (ib) sounds bad, to be sure, but this should be ascribed to the fact that it is difficult to construe (ib) as having an intensifier reading, because running into town is not a difficult thing to do. Thus, if the directional PP *into town* is replaced by, say, *to the final goal of a triathlon*, then it sounds much improved.

¹¹ A syntactic alternation of this kind can be observed in other verb classes, as illustrated below:

- (i) a. Susan washed/rinsed the soap out of her eyes.
- b. Susan washed/rinsed her eyes.
- c. *Susan washed/rinsed the soap. (in the intended sense)

The (ia), however, cannot be construed as having an intensifier reading, because of the nature of the verb.

In this context, it is worthwhile to notice that when the sentences in (40) are passivized, then the intensifier reading is lost, as shown below:

- (44) a. The strings were played off his guitar.
 b. The spokes were ridden off his bicycle.

Each of the sentences in (44) has only a resultative reading. The case (44a) cannot be felicitous if the strings were not actually broken off. The fact that the sentences in (40) are passivizable is a result of the fact that the end point state in these cases is not necessarily conceptualized as a surreal situation. This is why each sentence in (40) is ambiguous.

Using (40a) as a representative example, let us consider the conditions (c) and (d). With respect to the condition (c), the part-whole relation can be recognized to hold between the guitar and its strings, namely, the strings are functionally attached to the guitar. To put it differently, the referent of "the strings" is a functional part of the guitar. This point is related to the condition (d). It is important to notice that the fake object "the strings" is understood through conventional knowledge as an essential participant in guitar-playing. In this respect, the frame-semantic knowledge plays a significant role in construing (40a) as having an intensifier reading. In other words, it is because the concept "the strings" is frame-semantically linked to "playing" via the concept "guitar" that (40a) can be construed as having an intensifier reading. Without such frame-semantic knowledge of guitar-playing, (40a) could not make any sense.

Finally, with regard to the condition (e), we cannot continue playing the guitar when the strings are broken off. Thus the constructional entailment can be understood as referring to the end point beyond which the activity of guitar-playing cannot continue any more. Hence the condition (e) is also satisfied. Therefore, the sentences in (40) pattern exactly like the body part *off* construction, except that the body part term does not appear in object position.

With this in mind, let us generalize the configurational pattern that has been discussed under the name of the body part *off* construction one step further. Based on the representation (34iii), we can represent the relevant configuration informally as in (45a), where no reference to the body part term is made, and condense the conditions stated in (39) into (45b):

- (45) a. Form: [NP [_{VP}V {_X NP₁ off NP₂ }]]
 b. Conditions:
 (i) The resultative state indicated by X is conceptually

understood as the end point of the activity denoted by V.

(ii) There is a part-whole relationship between NP₁ and NP₂.

(iii) NP has an agentive access to NP₂.

This general pattern can be extended, with appropriate modifications, to a more comprehensive pattern that can be construed as having an intensifier reading. It is not clear how this constructional alignment with its semantic specifications is represented in speakers' linguistic knowledge. All we can say is that the body part *off* construction is a manifestation of this general pattern in which specification of the body part term is subsumed into the whole-part relationship.

6. Concluding Remark

The body part *off* construction is structurally parallel to other resultative structures, but it is invariably construed as having an intensifier reading. The emergence of such an intensifier reading is attributed to the interaction of its constructional property with our world knowledge. I have argued that a certain rule of construal is invoked so as to resolve the conflict between its constructional requirement and our pragmatic knowledge.

It is never an isolated phenomenon that the body part *off* construction exhibits an intensifier reading. Rather, this construction can be regarded as an instantiation of a larger configurational pattern that has an option of being construed as having an intensifier reading.

REFERENCES

- Goldberg, Adele E. (1994) *A Construction Grammar Approach to Argument Structure*, University of Chicago Press, Chicago.
- Jackendoff, Ray (1990) *Semantic Structures*, MIT Press, Cambridge, MA.
- Jackendoff, Ray (1997a) "Twistin' the Night Away," *Language* 73, 534–559.
- Jackendoff, Ray (1997b) *The Architecture of the Language Faculty*, MIT Press, Cambridge, MA.
- Levin, Beth and Malka Rappaport Hovav (1995) *Unaccusativity*, MIT Press, Cambridge, MA.
- Numberg, Geoffrey (1979) "The Non-Uniqueness of Semantic Solutions: Polysamy," *Linguistics and Philosophy* 3, 143–184.

- Rapoport, T. R. (1993) "Verbs in Depictives and Resultatives," *Semantics and the Lexicon*, ed. by James Pustejovsky, 163–184, Kluwer, Dordrecht.
- Slobin, Dan (1997) "Mind, Code, and Text," *Essays on Language Function and Language Type*, ed. by Joan Bybee, John Haiman and Sandra Thompson, 439–465, John Benjamins, Amsterdam.
- Talmy, Leonard (forthcoming) *Toward a Cognitive Semantics*, MIT Press, Cambridge, MA.
- Tenny, Carol (1994) *Aspectual Roles and the Syntax-Semantics Interface*, Kluwer, Dordrecht.

Foreign Language Institute
Kanazawa University
Kakuma-machi
Kanazawa 920–1192
e-mail: sysawada@kenroku.kanazawa-u.ac.jp