

The Concept EAT as a Metaphorical Source in English*

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Choi, Youngju. (2017). The concept EAT as a metaphorical source in English. *The Linguistic Association of Korea Journal*, 25(2), 1-21. Newman (1997, 1999, 2009), based on his introspection, shows how the concept EAT is utilized in metaphorical conceptualization. This paper will expand upon Newman's observation through the investigation of the corpus COCA. Since most of Newman's data come from literature, his work may not be an accurate representation of expressions that are used in everyday language. The COCA can supplement Newman's data, as it is a well-balanced collection of text. Moreover, corpus linguistics allows us to determine which stage of the eating process, among intake, mastication, swallowing, and digestion, is most prominently utilized in metaphorical conceptualization. This paper examines the metaphorical instances of the verbal expressions such as *eat*, *gobble*, *nibble*, *chew*, *gnaw*, *swallow*, and *digest*. This leads to the conclusion that the second stage, mastication, is the most frequently perspectivized in metaphorical conceptualization. Therefore, the most common metaphorical meanings related to the concept EAT are 'to destroy,' 'to eliminate,' and 'to bother.'

Key Words: the concept EAT, COCA, intake, mastication, swallowing, digestion, metaphorical conceptualization

1. Introduction

Wierzbicka (2009) claims that unlike the concepts 'living' and 'dying,' the

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concepts 'eating' and 'drinking' are not universal. She shows that some languages, such as Kalam and Warlpiri do not have distinct expressions for 'eating' and 'drinking'. Instead, there is a single word which roughly indicates both 'eat' and 'drink'; *nb* in Kalam and *ngarni* in Warlpiri. However, Wierzbicka's claim conversely indicates that even though the concepts 'eat' and 'drink' are not always distinct from each other, every language has at least one expression covering the two concepts. This is to be expected, as consumption is an essential part of human survival. Because of the universal need to eat and drink, it is predicted that these concepts will be used frequently in language, including as a part of metaphors. This has generated interest among researchers, including Newman and Wierzbicka.

Newman (1997, 2009) and Wierzbicka (2009) examined the many stages of eating in detail, as in (1).

- (1) ...there is an **intake** of some solid like substance into the mouth, usually achieved by the eater using their own hand(s). This is followed by **mastication** of the food in the mouth, involving primarily the teeth, tongue, and stomach through a process of **swallowing**. Inside the intestines/stomach is where I understand the food to undergo quite drastic transformations through processes one may refer to as **digestion**. Of course, remaining solids are eventually excreted, through in my own naive conception of eating, the act of eating terminates in the stomach, rather than the excrement. Alongside these components which make up the actual act of eating, one needs to recognize the most important function of eating, namely the **nourishment** it provides for the body. Accompanying these purely physical aspects of eating is the impression of taste which we may refer to as **gustation**. (Newman 1997, 215)

Newman (1997, 2009) himself categorizes metaphors derived from the concepts 'eat' and 'drink' into three; Agent-oriented metaphor, Patient-oriented metaphor, and Agent-and-Patient-oriented metaphor. Each category has a correlation to a stage of eating. For example, the stages *intake* and *swallowing* are correlated with the agent-oriented metaphor, because the actions involved are volitional actions by an agent. In the case of the stage *mastication*, the most

prominent feature is the pain and destruction of the object that is being masticated. Therefore, mastication is related to patient-oriented metaphor. If the volitional action of an agent and the negative effect to the patient is mixed in an expression, it is categorized as an agent-and-patient-oriented metaphor.

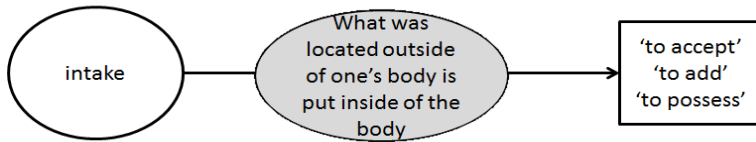
Newman significantly contributes to our understanding of how we metaphorically conceptualize the universal concept 'eat' (and 'drink'). This paper will extend Newman's observations through a corpus investigation. All of Newman's data comes from literature, meaning that it may not include metaphors which are prevalently used in everyday language. The corpus provides an abundant source of everyday language, as well as the tools to more thoroughly analyze the metaphorical meanings of EAT. Moreover, the development of corpus linguistics has made it possible to count metaphors (Deignan and Potter 1999, Deignan 1999, 2005, 2006, Stefanowitsch 2006). Consequently, the frequency observed from a corpus can reveal which part of the eating process is the most frequently used in metaphorical conceptualization. In implementing the idea, this paper will extract data from the corpus, Corpus of Contemporary of American English (COCA), focusing on verbal expressions, such as *eat*, *gobble*, *nibble*, *chew*, *gnaw*, *swallow*, and *digest*, which are literal variations of the concept EAT. The paper will pay special attention to revealing which stage of the eating process is most prominently perspectivized in the metaphorical conceptualization.

2. Research Method

The observation has been organized based on the stages of the eating process as Newman (1997) introduced; *intake*, *mastication*, *swallowing*, and *digestion*. The following figures will explain how metaphorical meanings arise in different stages of eating.

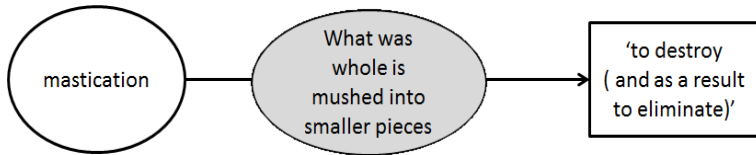
In the first stage intake, food located outside of one's body is put inside the body. The food consumer's acceptance of the food is metaphorically interpreted as the meaning 'to accept.' The acceptance of food into the boundary of oneself is metaphorically interpreted as meaning 'to add' and 'to possess.'

Figure 1. how the intake stage is interpreted metaphorically



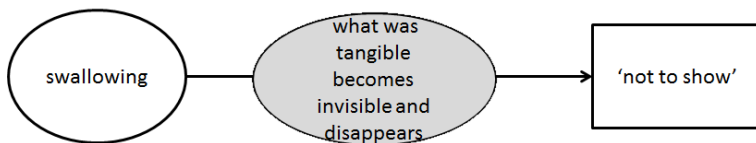
During the mastication stage, food in the mouth is broken down into smaller pieces. This process is metaphorically interpreted as 'to bother,' 'to destroy,' and 'to eliminate as a result of the destruction.'

Figure 2. how the mastication stage is interpreted metaphorically



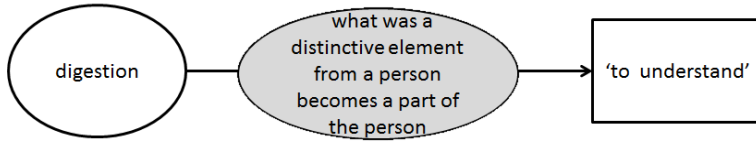
In the third stage, swallowing, food that used to be tangible in the mastication stage becomes invisible, leading to the metaphorical meaning 'not to show' and 'to hide.'

Figure 3. how the swallowing stage is interpreted metaphorically



In the digestion stage, food becomes a nutritious element and a part of a food consumer. When the concept is mapped onto a cognitive domain, it means 'to understand,' because knowledge, which is a distinctive cognitive element, becomes a part of a person if it is well understood. As the digestion of food gives a person the energy to work, the understanding of knowledge gives a person the power to think.

Figure 4. how the digestion stage is interpreted metaphorically



Deignan (2005, 2006) claims that metaphorical usage of an expression takes syntactically different forms from its literal counterpart. For example, the verb *build* is, in most cases, accompanied with *up* when it has a metaphorical meaning as in *build up the relationship*, or *build up the suspense*. A similar pattern is observed in the verbal expressions related to the concept EAT. The verbs which are variations of the concept EAT are often combined with particles (or prepositions) when they have metaphorical meanings, as shown in *eat up the territory*, *eat into him*, *gobble up the company*, *chew up our income*, *eat at his nerves*, *gnaw at his nerves*, and *nibble at the problem*. *Swallow* has metaphorical meanings by itself. However, when combined with prepositions, as in *swallow up*, it is guaranteed to be a metaphor. The only exception is the verb *digest*. Its literal and metaphorical meanings occur in the same simple form as in *digest milk* and *digest the information* and its literal and metaphorical meanings are equally distributed. Therefore, the ten verbal expressions, *eat up*, *eat into*, *gobble up*, *chew up*, *eat at*, *gnaw at*, *nibble at*, *swallow*, *swallow up*, and *digest* will be examined in the corpus COCA. Since the main purpose of the paper is to reveal which stage of the eating process is most utilized in metaphorical conceptualization, the paper will focus on showing the frequency of the metaphorical meanings of the ten verbal expressions with relevant examples. The observation is restricted to the root form of the verbal expressions because it is the most frequently occurring form, and the most likely to be used metaphorically. The total occurrences of the ten verbal expressions are shown in <table 1>.

Table 1. Total Frequency of the Ten Verbal Expressions

Expressions	<i>eat up</i>	<i>eat into</i>	<i>gobble up</i>	<i>chew up</i>	<i>eat at</i>
Total Occurrences	454	108	232	90	871
Expressions	<i>gnaw at</i>	<i>nibble at</i>	<i>swallow</i>	<i>swallow up</i>	<i>digest</i>
Total Occurrences	73	71	3630	98	1238

All the examples, except for *swallow* and *digest*, are collected in excel spreadsheets and their meanings are manually categorized. For *swallow* and *digest*, 200 random samples for each example are examined. The total occurrences of metaphorical meanings are projected based on the ratio of the metaphorical meanings. For example, when we have 20 occurrences of a metaphorical meaning in 200 samples, the ratio is 10%. When that ratio is applied to the total occurrences of *swallow*, 3630, we get the result, 363.

In order to observe which one is the most frequent metaphorical meaning of the verbal expressions, right collocates are examined, using the window spans¹⁾. Here, since we are only interested in nominal collocates after the given expressions, the spans are specified as 0-2, 0-4, 0-5, and 0-6. The spans are not consistent but the inconsistency does not matter because what we are interested in is not comparison between various expressions, but comparison between right collocates of the given expression. Comparison of collocates leads us to know which metaphorical meanings are the most frequent one in one expression.

3. Corpus Investigation of Metaphorical Extensions of the Concept EAT

The following subsections are organized by the stages of eating. We will examine them in the following order: the *intake* stage, the *swallowing* stage, the *digestion* stage, and the *mastication* stage. The *mastication* stage will be examined last, as the bulk of the metaphorical instances relating to EAT belong to the *mastication* stage.

3.1. The *Intake* Stage

As explained in the previous section, the *intake* stage is metaphorically construed as 'to accept,' 'to add,' and 'to possess.' These meanings are not

1) The window span is specified when one wants to search collocates within a certain range. For example, the window span of 3-4 searches three words before the given expression and four words after it. The corpus gives the words occurring within the designated span.

commonly found in the metaphorical instances of the ten verbal expressions chosen for examination. Only a few instances of the four expressions, *eat up*, *gobble up*, *swallow*, and *swallow up*, are judged to be relevant to the *intake* stage, as shown in <table 2>. Among 200 samples of *swallow*, 20 instances are observed as being relevant to the intake stage. The 10% is applied to the total number 3630, letting us expect 363 metaphorical instances²⁾.

Table 2. Intake Stage: Frequency of Metaphorical Instances

Verbs	<i>eat up</i>	<i>gobble up</i>	<i>swallow</i>	<i>swallow up</i>
Intake Meaning	13	19	363	5
Total Frequency	400			

Eat up in examples (2a) means 'to accept or to absorb (an idea).' In (2b) *gobble up* means 'to accept or to absorb (an idea).' Gobbling up food brings to mind a more exaggerated action than simply eating up food. Similarly, the metaphorical meaning of *gobble up* is more uncontrolled, garish, or quick compared to *eat up*. Here, gobbling up (all the) information means 'absorbing information' and 'learning the information as a result of absorbing.' *Swallow* also means 'to accept,' as in (2c). When it means 'to accept,' it is usually accompanied with the adjectives *difficult* and (*not*) *easy*.

- (2) a. Your child is getting advanced education from older kids. Younger kids tend to **eat up** everything older kids say, says Douglas, so you may want to import some peers.
- b. With their indiscriminating Cookie-Monster minds, toddlers **gobble up** all the information they encounter.
- c. If abortion was the most nettlesome issue for the Republicans, the new welfare bill, signed only last week by President Clinton, is proving somewhat difficult for many Democrats to **swallow**.

2) Most instances of *eat up* and *gobble up* are related to the *mastication* stage and most instances of *swallow* and *swallow up* are, understandably, related to the *swallowing* stage.

In (3), it is demonstrated that *gobble up*, *swallow*, and *swallow up* are used to designate 'to possess.'

- (3) a. As the company uses its highpriced shares to **gobble up** similar Internet service firms around the Continent, it wants to project ...
- b. In a telecommunications world that has grown accustomed to watching giants **swallow** one another in a quest for scale, the splintering of one of the titans forced many to reassess the competitive landscape.
- c. The difference means that large retailers continue to **swallow up** more and more of the market while the overall loss is coming out of the pockets of independent stores.

3.2. The *Swallowing* Stage

The *swallowing* stage metaphorically means 'to hide' and 'to make things disappear.' Out of the ten verbal expressions, *swallow* and *swallow up* are found to include instances of metaphor related to the *swallowing* stage. Among 200 random samples of *swallow*, 25 were observed as having the metaphorical meaning related to the *swallowing* stage. When this ratio is applied, the frequency 453 is expected.

Table 3. Swallowing Stage: Frequency of Metaphorical Instances

Verbs	<i>swallow</i>	<i>swallow up</i>
Swallowing Meaning	453	93
Total Frequency	564	

The examples are given in (4).

- (4) a. The first few times I had to **swallow** my pride.
- b. This internship taught me how to push, to **swallow** my fear that someone's going to be bitchy, ...
- c. Finally Jimmy started working on a novelette, "Ignorant Armies," and

this allowed him (and me) to **swallow** our disappointment when on March 13 Viking rejected "Crying Holy" and sent it back.

As demonstrated in Table 4, most of the right collocates of *swallow* are relevant to emotions such as *pride*, *fear*, *disappointment*, *tears* and *laugh*, indicating that the metaphorical meaning of *swallow* is most frequently related to 'to hide (emotions).'

Table 4. Nominal Collocates of *swallow* in the Window 0–2

Concept	Words	Frequency
emotion	<i>pride</i> (67), <i>anger</i> (9), <i>fear</i> (6), <i>tears</i> (5), <i>laugh</i> (3), <i>disappointment</i> (3), <i>grief</i> (3)...	96
word/ idea	<i>word(s)</i> (12) <i>idea</i> (5)...	17
sound	<i>sound(s)</i> (3), <i>yawn</i> (3)...	6
	total	119

All of the 98 instances of *swallow up* are used metaphorically, and most of them occur with the meaning 'to make (something) disappear,' as shown in (5).

- (5) a. Like other tech firms addicted to high growth, L &H; sought to use this inflated currency to **swallow up** its rivals, including the American firms Dragon Systems Inc. of Newton, Mass., and Dictaphone Corp. of Stratford, Conn.
- b. Talia watched Jack's huge hand **swallow up** Susie's much smaller one.
- c. Sometimes Bridget was afraid her surface-self had become so adept at this witless will-to-good it would finally **swallow up** her real self, like a sleeping-bag turned inside-out. What drove this reflex?

3.3. The *Digestion* Stage

The *digestion* stage is related to the metaphoric meaning 'to understand.' The only verbal expression occurring with this meaning was *digest*. Of 200 random samples, 74 examples are observed as having the metaphorical meaning related

to the digestion stage. When this ratio is applied to the total frequency 1238, the frequency 458 is obtained.

Table 5. Digestion Stage: Frequency of Metaphorical Instances

Verbs	<i>digest</i>
Digestion Meaning	458

As shown in <table 6>, the most frequent collocate is 'information' and most other collocates are closely related to the concept INFORMATION, indicating that the *digestion* stage is strongly linked to the metaphorical meaning 'to understand.' The examples are given in (6).

Table 6. Nominal Collocates of *digest* in the Window 0-4

Concept	Word	Frequency
information	<i>information</i> (32), <i>news</i> (12), <i>thing(s)</i> (10), <i>data</i> (5), <i>idea</i> (5), <i>details</i> (5), <i>words</i> (4), <i>fact</i> (3), <i>report</i> (3), <i>acquisitions</i> (2), <i>implications</i> (2), <i>impressions</i> (2), <i>knowledge</i> (2), <i>logic</i> (2) <i>meaning</i> (2), <i>images</i> (2)...	93
life	<i>life</i> (3)...	3
	total	96

- (6) a. Alan Greenspan is a great listener, and he exposes himself to people who know what's going on in this town, who are moving around the town, and he knows how to **digest** that information.
- b. Wall Street had little time to **digest** the news and stocks broke a four-day losing streak.
- c. There are predictions that smart systems will soon be able to perform library research, **digest** the data, and present conclusions in written form.

3.4. The *Mastication* Stage

The *mastication* stage is related to the metaphorical meaning 'to destroy,' 'to make something disappear by destroying it,' or 'to bother.' Most metaphoric instances of the verbal expressions *eat up*, *eat into*, *gobble up*, *chew up*, *eat at*, *gnaw at*, and *nibble at* are related to the *mastication* stage. It indicates that the *mastication* stage is the most frequently used in the metaphorical conceptualization of the concept EAT.

Table 7. Mastication Stage: Frequency of Metaphorical Instances

Words	<i>eat up</i>	<i>eat into</i>	<i>gobble up</i>	<i>chew up</i>	<i>eat at</i>	<i>gnaw at</i>	<i>nibble at</i>
Frequency	261	105	135	77	22	56	23
Total Frequency	679						

3.4.1. 'to destroy' or 'to make something disappear by destroying it'

Among the 462 instances of *eat up*, more than half, 261, are used with the metaphorical meaning related to the mastication stage. Their objects denote concepts such as MONEY, TIME, SPACE, or RESOURCE, as shown in Table 8.

Table 8. Nominal Collocates of *eat up* in the Window 0–6

Concept	Word	Frequency
money	<i>fare</i> (13) <i>tax(es)</i> (8) <i>cash</i> (5) <i>budget(s)</i> (7) <i>money</i> (5) <i>cents</i> (4) <i>savings</i> (4) <i>dollar(s)</i> (5) <i>income</i> (3) <i>profit</i> (3) <i>revenues</i> (3) <i>estate</i> (3) <i>salary</i> (2) <i>fund</i> (2) <i>property</i> (2)...	69
	<i>time</i> (18) <i>hours</i> (7) <i>minutes</i> (4) <i>week</i> (4) <i>night</i> (2) <i>day</i> (2)...	37
space	<i>space</i> (7) <i>miles</i> (2) <i>room</i> (2)...	11
resource	<i>resources</i> (5) <i>data</i> (3) <i>batter</i> (2)...	10
others	<i>world</i> (4) <i>memory</i> (2) <i>power</i> (2)...	8
	total	135

In (7), the objects of *eat up*, such as *taxes*, *a couple of hours*, and *the sidewalk*

are related to MONEY, TIME, and SPACE³⁾, respectively. When the objects are eaten up, they are used up in part and therefore a part of them is eliminated. Again, *eat up* here means 'to use up, and as a result, to eliminate.'

- (7) a. They say the benefits offered to the undocumented are an economic albatross for California, serving as magnets to draw people across the boarder illegally and **eat up** taxes paid by legal residents.
- b. Online research and phone calls can easily **eat up** a couple of hours of my workday.
- c. The adjacent cafs, which once enjoyed prime location over al-Feddan, **eat up** the sidewalk with their extended terrace seating.

Eat up can eliminate RESOURCES such as *monthly cellular data allotment* and *educational and employment opportunities*, as in (8). Here too, *eat up* means 'to use up, and as a result, to eliminate (in part).'

- (8) a. Spotify will **eat up** your monthly cellular data allotment in no time.
- b. ... some American blacks worry that new arrivals will **eat up** educational and employment opportunities that they won in the civil rights struggle.

Eat into is almost always used metaphorically. Of the 108 instances of *eat into*, only three are exceptions to this rule. The objects of *eat into* are very similar to the objects of *eat up*, and they can be categorized into the concepts MONEY, TIME, SPACE, and RESOURCE as can be seen in Table 9.

3) Sometimes the space being eaten up is not physical but metaphorical. In (i), the metaphorical space *headlines* is eaten up, meaning that the space is taken up by news such as *Mitterrand's scandal*.

(i) He would have thought an incredible death like that would have headlined as the crime of the year, but Mitterrand's scandal, Cuba's charismatic young Fidel Castro, and the ongoing unrest in Algiers continued to **eat up** the headlines.

Table 9. Nominal Collocates of *eat into* in the Window 0–5

Concept	Word	Frequency
money	<i>profit(s) (12) returns (6) savings (4) budget (4) funds (2)</i> <i>margin(s) (4) ...</i>	32
time	<i>time (8) ...</i>	8
space	<i>lead (2) ...</i>	2
resource	<i>energy (3) data(2) oil (2) ...</i>	7
others	<i>Democratic base (2) bottom line (2) ...</i>	4
	total	53

As shown in (9), various nominals such as *profits*, *time*, and *data plans* are used as objects of *eat into*. In these cases, *eat into* means something similar to *eat up*: ‘to eliminate a part of something.’

- (9) a. I think most companies are scared of it, because they think it will **eat into** their profits.
- b. Nationwide chain stores with extended hours mean you can pick up anything along the way, but too many stops at Walmart **eat into** travel time.
- c. ...they can quickly **eat into** cellular data plans; a 20-minute phone call uses more than 60 MB.

Abstract concepts that are not related to MONEY, TIME, SPACE, or RESOURCE are shown in (10). They reveal a slight difference in meaning between *eat up* and *eat into*. Whereas *eat up* emphasized elimination through usage, *eat into* emphasizes elimination through destruction.

- (10) a. But what’s clear is that Iran’s new leaders badly need a deal on sanctions as the economic consequences of their rogue nuclear program **eat into** their popularity.
- b. It is also certain that a casino would **eat into** local businesses -- especially restaurants, nightclubs and tourist-focused businesses.
- c. ...if this trend continues, domestic consumption could **eat into** Saudi oil exports by 2021 and render the kingdom a net oil importer...

Gobble up similarly indicates 'to destroy.' Among the total 232 instances of *gobble up*, 151 are used metaphorically. Most of these metaphoric instances, which are 135 cases, are related to the *mastication* stage.

Table 10. Nominal Collocates of *gobble up* in the Window 0–5

Concept	Word	Frequency
space	(farm/wood)land (8) space (3) territory (3) road (2) ...	16
resource	oil (3) data(2) resources (2) gas (2)...	9
money	money (2) savings (2) tax (2) capital (2)	8
time	time (2) ...	2
others	companies (2) firms (2) country (2) opportunities (2) service (2) information (2) stores (2)...	14
total		49

While the concept MONEY is the most frequent collocate of *eat up* and *eat into*, the concept SPACE is the most frequent collocate of *gobble up*. When *gobble up* is used with SPACE as the collocate, it means 'to take over and make unavailable.' To make something unavailable is a kind of elimination. In (11a) and (11b), physical spaces, *the remaining open space and farmland* and *wildlife habitat*, are the objects of *gobble up*.

- (11) a. If we don't enact protections now, the pressure to develop will eventually **gobble up** piece by piece the remaining open space and farmland we prize on the south coast.
- b. As the continent's growing human populations **gobble up** more wildlife habitat, expanding elephant herds compete with cattle farmers for foraget and...

The concepts MONEY and TIME also occur as objects of *gobble up*, as in (12a) and (12b), respectively.

- (12) a. True enough, the stock market did **gobble up** some of her savings, what she calls the "gravy," or the extra cash she made in the markets that would have funded annual trips to wherever she wanted to go.

- b. That could also **gobble up** a year or so.

Among 90 instances of *chew up*, 77 are used metaphorically. The concepts MONEY and TIME occur as objects. Examples in (13a) and (13b) are related to MONEY and those in (13c) and (13d) are related to TIME. Similarly to *eat up*, *chew up* means 'to destroy and therefore eliminate a part of something.'

- (13) a. But even as the \$30 billion-a-year gambling juggernaut gains momentum, economists and regional planners are predicting that it will **chew up** more income than it creates.
- b. Even though his house is paid off and his three children are grown, he couldn't stand watching the market **chew up** 40% of his retirement account.
- c. Many employers whose workers use BART say that no matter what options they create, from ride-sharing to staggered work hours, a strike will not just **chew up** employee time, but also hurt business.
- d. You **chew up** a lot of time. Limited manufacturing capacity reinforced the tight timeline.

Other abstract concepts such as *data*, *shoreline*, and *confidence* can also be chewed up. Again, *chew up* here means 'to destroy and therefore eliminate a part of something.'

- (14) a. If you use an service over your device's regular wireless data connection, you need to pay attention, because it could **chew up** more data than you intended, incurring overage charges and eliminating any cost savings.
- b. Hurricane Irene is expected to **chew up** 127 miles of Jersey shoreline, damaging not only the beaches but severely impacting the state's \$35 billion tourism industry.
- c. A broad market decline, with the choppy daily churning action of a meat grinder, could **chew up** investor confidence. And if investors lose faith in a declining market, they could begin to head for the exits.

When people are chewed up, they are metaphorically destroyed. They can be damaged physically or mentally.

- (15) a. With free-enterprise capitalism that thinks it can **chew up** people and spit the ones it damages into hospitals unequipped to handle them?
 b. I've watched it **chew up** a lot of good people along the way.

3.4.2. 'to bother'

Most of the 871 occurrences of the expression *eat at* means 'to eat food at (a place) or at (a certain period of time).' However, it does occur metaphorically 22 times. In these cases it means 'to destroy' physically, as in (16a), and psychologically, as in (16b) and (16c).

- (16) a. Cancer doesn't just **eat at** your body; it also attacks you emotionally and psychologically.
 b. Take away a partner and there's no one to share responsibility, administer first-aid, run for help, or take the point position when bushwhacking starts to **eat at** your nerves.
 c. And on those occasions, an offhand remark like this can **eat at** your psyche.

Among the 73 occurrences of *gnaw at*, 56 are metaphoric. *Gnaw at* can also take something related to one's psychology as its object, such as *heart*, *mind*, *conscience*, *guts*, *psyches*, and *anxiety*, as shown in (17). In this case, it means 'to destroy,' or at least to work as a destructive force, which, in turn, bothers the person to whom the *heart*, *mind*, *conscience*, etc belong.

- (17) a. She did not want to be one of those people whom she despised as bitter losers. But doubt began to **gnaw at** her heart.
 b. The chess squares begin to **gnaw at** her mind.
 c. Well, she had planned a fine revenge for my Lord Arrogance, and she refused to entertain the misgivings which had begun to **gnaw at** her conscience.

Eat at and *gnaw at* mean 'to bother (a person)' when it has an object of a personal pronoun such as *him*, *her*, *you*, and *me*. Destroying one's body, soul, nerves is closely connected to bothering the person.

- (18) a. Despite the fact he may have no conscience about this at all -- in other words, he's a sociopath -- it's going to **eat at** him unconsciously.
- b. Does that decision still **eat at** you?
- c. But a nagging feeling continued to **gnaw at** me.
- d. These questions **gnaw at** parents who observe their children at the brink of adulthood.

Among 71 occurrences *nibble at*, 23 instances are used metaphorically. Examples of objects which are MONEY or SPACE can be seen in (19a) and (19b). Since nibbling is taking small bites out of something, the gradual and slow process of destruction is emphasized in its metaphorical meaning.

- (19) a. But so long as they **nibble at** the edges of our overgrown budget, they are part of the problem.
- b. ...and an influx of recreationists and residential development continues to **nibble at** bear habitat.

Sometimes, problems can be nibbled at. The action of nibbling still retains the meaning 'to destroy,' because it is destroying the problem. But in these instances, the slowness of nibbling is more emphasized than the destructiveness of nibbling. Nibbling at a problem means 'to solve a problem very passively, slowly, and ineffectively.'

- (20) a. ...an annual economic growth rate on the order of 3.5 percent is necessary simply to begin to **nibble at** unemployment ...
- b. But spending at these levels would still only **nibble at** the problem outlined by the E.P.A. and others.

3.4.3. Interim summary

What we have observed so far reveals that the mastication stage of EAT is the most frequent used in metaphorical conceptualization. The result is summarized in <table 11>.

Table 11. Frequency Comparison

Stage	Intake	Mastication	Swallowing	Digestion
Verbal		<i>eat up,</i>		
Expressions	<i>eat up,</i> <i>gobble up,</i> <i>swallow,</i> <i>swallow up</i>	<i>eat into,</i> <i>gobble up,</i> <i>chew up,</i> <i>eat at,</i> <i>gnaw at,</i> <i>nibble at</i>	<i>swallow,</i> <i>swallow up</i>	<i>digest</i>
Frequency	400	679	564	458

Even though the mastication stage shows the highest frequency, the frequencies of each stage does not seem to look significantly differ from each other. However, we can say that the mastication stage is most frequently utilized among the four stages with the following reasons. First, varieties of verbal expressions such as *eat up*, *eat into*, *gobble up*, *chew up*, *eat at*, *gnaw at*, and *nibble at*, have metaphorical meanings relevant to the mastication stage. Second, simple verbs *eat*, *gobble*, *chew*, *gnaw*, *nibble*, which are not examined in the paper, also have metaphorical meanings related to the mastication stage, even though the cases are very rare. For example, when 200 random samples of *eat* are examined, the following four cases in (21) are used metaphorically and their meanings are all relevant to the mastication stage, namely 'to destroy' or 'to bother.'

- (21) a. ... both advised him not to let the racism he had experienced **eat** him up inside...
- b. And you have to live with, you know, the fact that you can't control things. But it does **eat** away at you and, you know, you do the best

that you can.

- c. Make me **eat** my heart out, is that it?
- d. The most recent Altman Weil survey suggests that law firms often **eat** about 22 percent of their costs...

When the ratio is applied to the total frequency of *eat*, 50876 , 1018 instances are expected to have the metaphorical meaning. When the number is added to 679, we have the total frequency 1697. Then it can be concluded that the mastication stage shows significantly high frequency.

4. Conclusion

We have observed metaphoric instances of ten verbal expressions which are variations on the concept EAT: *eat at*, *eat into*, *eat up*, *gobble up*, *nibble at*, *chew at*, *gnaw at*, *swallow*, *swallow up*, and *digest*. These instances were categorized based on different stages of the eating process; *intake*, *mastication*, *swallowing* and *digestion*. The metaphoric instances of *swallow* used the verbal phrase to mean 'to hide', especially 'to hide an emotion.' Similarly, *Swallow up* was used to mean 'to make something disappear.' These meanings of *swallow* and *swallow up* are linked to the *swallowing* stage of eating. Instances of *digest* used *digest* to mean 'to understand', which is related to the *digestion* stage, as could be expected.

A few instances of *eat up* and *gobble up* meant 'to accept,' which is related to the *intake* stage, but most instances meant 'to destroy,' 'to eliminate,' or 'to bother,' which are related to the *mastication* stage. Instances of *eat into*, *chew up*, *eat at*, *gnaw at*, and *nibble at* also had meanings related to the *mastication* stage, making the *mastication* stage the most commonly utilized in the metaphorical conceptualization by far.

The corpus-aided findings significantly enhance our understanding of metaphors of English EAT as explored by Newman (1997). While Newman (1997) provides some example sentences for each meaning, based on his introspection, they demonstrate how often we use the concept EAT metaphorically. They also reveal that the *mastication* stage, among different

stages of eating process, is the most frequently utilized in metaphors. It indicates that negative aspects of eating, such as bothering, destroying, and eliminating, are much more easily perspectivized in metaphorical conceptualization of EAT.

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