Interpreting and Human Inferential Processing

Yoshihiro MINAMITSU*

Abstract

This paper considers how human infer in utterance comprehension by showing three pragmatic criteria that are crucial to the translation process of referring expressions in simultaneous interpreting based on coherence, relevance, and meaningfulness. Subsequently, meaningfulness is argued to be the most preferable criterion. It is defined in terms of the interpreter's attempt to reduce the overall processing cost and to adjust the production to meet the hearers' abilities and preferences. Meaningfulness allows for greater flexibility in describing the interaction between decoding, assigning referents, and translation in real time. Furthermore, it explains why the interpreter evaluates one translation candidate as adequate and others as inadequate in case of more than one candidate.

1. Introduction

A considerable number of assumptions have been proposed concerning utterance comprehension. Interpreting studies provides interesting data of real-time language processing for human utterance comprehension. Focusing on real-time utterance comprehension, delivery or producing the target language (henceforth, TL) in simultaneous interpreting (henceforth, SI) seems to reflect how interpreters understand understanding the source language (henceforth, SL), because language processing in SI could be almost the same as that of other forms of communication.

There are, however, slight differences between SI and other forms of communication. Major tasks and constraints specific to SI is as follows; first, interpreters are obliged to translate SL into TL under severe time constraints (Pöchhacker 1995; Seleskovitch 1968/1978; Seleskovitch & Lederer 1989/1995; Setton 1999; Setton & Dawrant 2016). Second, interpreters are required to convey the original speakers' communicative intention as faithfully as possible (Funayama 2000; Minamitsu & Nishimura 2005; Pöchhacker 1995; Setton 1999; Setton & Dawrant 2016). Thirdly, the processing unit in SI would differ from the other types of utterance understanding. In linguistic analyses of utterance comprehension, the utterance is usually analyzed by propositional unit derived from a sentence, because the aim is to provide an explanation of how the hearer achieves overall interpretation of what the speaker intends to communicate (Back 1994; Carston 2002;

* Center for English Education, Faculty of Engineering, Osaka Electro-Communication University

Recanati 2004; Sperber & Wilson 1986/1995). In contrast, simultaneous interpreters start translating in the middle of the SL sentence. This implies that the translation begins before the overall interpretation of the SL sentence in question is yielded. Hence, as Setton (1999) stated, the unit for analyzing real-time processing during SI should be a micro one.

This paper aims to propose an assumption on inferential language processing by tracing the real-time translation process in SI, by focusing on the interpreter's intuitive pragmatic regulation in translating referring expressions. The paper also attempts to explain the topic with emphasis on two aspects: (a) how interpreters inferentially evaluate the translation candidates of referring expressions as adequate in real time; (b) how interpreters decide with their intuition that one translation candidate is adequate and that others are inadequate intuitively when there is more than one candidate available.

Section 2 will briefly review recent approaches that affect the acceptability of translation, namely, the coherence-based approach and the relevance-based approach. Subsequently, it is illustrated how these approaches can be applied in consideration of the translation of referring expressions in SI. Sections 3 and 4 constitute the major body of the present investigation. Section 3 will discuss the limitations of each previous, pragmatic account, then introduce an alternative criterion in section 4, and discuss how the criterion works with reference to authentic SI corpora from English into Japanese.

2. Acceptability criterion in SI

This section starts with a brief survey of past approaches to acceptability criterion in SI. The argumentation presented by these approaches share the following assumptions:

(1)

a. The goal of SI is to convey the original speaker's message or what the speaker intends to convey.
b. The first interpretation that satisfies the criterion when identifying the communicative intention of the original speaker is the one that the simultaneous interpreter should choose under severe time constraints.
c. The original speaker's communicative intention is evaluated in terms of several pragmatic criteria of acceptability that result in the interpretation of SL.

Assumptions (1a)-(1c) are widely accepted in SI studies (see, Setton 1999; Setton & Dawrant 2016). There is, however, little agreement on how interpreters judge the original speaker's communicative intention to be adequate in real time (see, Gile 1995; Pöchhacker 1995; Setton 1999). Accordingly, definitions of acceptability of production in SI vary. The past studies on the acceptability criteria of production that are reviewed here can be classified into the following two categories:

(2)

a. Coherence-based criterion (Pöchhacker 1995)

b. Relevance-based criterion (Setton 1999)

The following subsections will briefly review two approaches: Pöchhacker's coherence-based criterion and Setton's relevance-based criterion, and illustrate how these two criteria could respectively be applied to translating referring expressions.

2.1. Coherence-based criterion

Perhaps the most prevailing view in current interpreting studies is that production in SI should be product-oriented. A prototypical example is Pöchhacker's (1995) analysis of the Skopos[1] -based approach. He suggested that the norm for the interpreter's translation of the SL into the TL should be based on the following pragmatic criteria: the crucial standards for the output of SI should be "'conventional' (acceptable, adequate, informative, correct, marked, etc.) by target-cultural standards as the source text within the communicative traditions of the source culture" (Pöchhacker 1995:39). The assumption behind this approach is that SI should make their translations coherent with the "diaculture[2])."

Examples (3) to (5)[3] illustrate how Pöchhacker's assumption could apply to the translation of referring expressions in English-Japanese SI.

(3)

SL: ***This*** was a threat that in the aftermath of 9/11/2001.

TL: ***kore*** wa 9 gatsu 11 nichi no ano jiken no ato wa, wareware ni totte wa kyoui de aru wakedesu.

[#1]

(4)

SL: ...***they*** were if not manipulating, at least managing…

TL: ...toiunomo karera wa, sousa wa shinakattamademo, ma kanri wa shiteita wakedesu ne.

[#1]

(5)

SL: So I think Perhaps ***the secretary general***'s a tad overdramatic.

TL: ***Anan jimu souchou*** no iibun wa chotto oogesa ka to omoimasu.

[#3]

The italicized portion in (3) is a demonstrative pronoun, in (4) it is a personal pronoun, and in (5) it is a noun phrase (henceforth, NP). These can be evaluated as satisfying the Skopos or goal of SI, because the target texts achieve the same range of functions as the original texts and thus yield fidelity[4]. For example, the sources of (3) and (4) are demonstrative and personal pronouns and their function is to gear hearers toward the retrieval of explicitly mentioned entities. In general, the speaker uses demonstrative and personal pronouns when there is no need to create new antecedents, and the hearer is required to search for some existing assumptions derived from the preceding discourse (Gundel 1996). Although hearers of (3) and (4) know that referents explicitly exist, they had to infer what referents were intended as interpreters do.

In (5), the SL is the definite NP and its intended referent is assigned to the TL. In the case of a definite NP, there are three possible types: first, an NP that shares a noun with an antecedent NP; second, an NP that re-describes a previously mentioned antecedent; and third, an NP that is newly introduced and refers to the only or obvious antecedent. "The secretary general" in (5) is the third type of definite NP, and the interpreter is geared toward the retrieval of new entities from memory. When the person in charge of a specific organization is introduced, a definite NP tends to be used in English, whereas the personal name with his/her title tends to be used in Japanese.

2.2. Relevance-based criterion

Setton (1999) suggested that the goal of SI is "to convey the message to the hearers at the same level of relevance" (Setton 1999: 230). He proposed the online processing model, in which the executive module plays a central role. According to Setton, the executive carries out two inferential tasks: primary pragmatic processing and secondary pragmatic processing. The concept behind primary pragmatic processing shares the Relevantist assumption that hearers interpret utterances by looking for the presumption of optimal relevance, as shown in (6):

(6) Presumption of optimal relevance (revised)

a. The ostensive stimulus is relevant enough for it to be worth the addressee's effort to process it.
b. The ostensive stimulus is the most relevant one compatible with the communicator's abilities and preferences.

(Sperber & Wilson 1986/1995: 270)

The typical feature of this is the fact that the utterance interpretation process could be accounted for by integrating processing cost and cognitive effect in the following strategy. Hearers are entitled to expect at least enough cognitive effects to make the utterance worth their attention. The processing cost is the effort that is needed to achieve these cognitive effects. Hearers are entitled to accept the first and foremost interpretation that satisfies their expectation of optimal relevance. On the other hand, Setton defines that the secondary pragmatic processing is an autonomous process specific to SI processing, and carries out the coordination of translation in order to be acceptable for hearers.

In translating referring expressions, interpreters first decode the expressions, then augment and complete intended referents or meanings, which have come too late for an ideal integration. Examples (7) and (8) illustrate how Setton's ideas might apply to cases of referring expressions in SI from English into Japanese:

(7)(=3)

E 008	THEM,/ IT PROVIDED LOGISTICAL INTELLIGENCE AND OTHER FORMS OF
J 008	…kanousei no arukuni de arimasu./ sadamu husein wa terorisuto no
E 009	SUPPORT.// ***THIS*** WAS A THREAT THAT, IN THE AFTERMATH OF
J 009	kunren mo shita, sonohoka iroiro roji no shien, iroiro na shien mo shimashita.//
E 010	9/11/2001PRESIDENT BUSH AND THE UNITED STATES CONGRESS AND, I
J 010	***kore*** wa 9 gatsu 11 nichi no ano jiken no ato wa, wareware ni totte wa
E 011	THINK, THE OVERWHELMING MAJORITY OF THE AMERICAN PEOPLE
J 011	kyoui de aru wakedesu.// desukara bussyu daitouryou, sorekara amerikano

[#1]

In these examples, the interpreters started translating while the original sentence continued to develop. In example (7), when the interpreter heard the unit of expression "this was," she seemed to assign "this" and "was" to the logical categories of NP and verb phrase (henceforth,VP), respectively. Subsequently, she constructed anticipatory hypotheses for the overall structure of the sentence, namely, that an NP would follow it. Furthermore, she tried to access a range of possible referents for "this," as a set of conceptual addresses with the word "this" as lexical entry. Under severe time constraints, she seemed not to be ableto identify the intended referent. Hence, she translated "this" into the Japanese demonstrative pronoun "kore," which formally corresponds with the original.

However, Setton would explain example (8) differently than the above-mentioned examples (7) :

(8)(=5)

E 008	SO I THINK PERHAPS ***THE SECRETARY GENERAL*** 'S AT AD OVERDRAMATIC.//
J 008	tsugitsugi to bunkiten ni chokumen shite kita
E 009	BUT THERE IS A FUNDAMENTAL PROBLEM NOW BECAUSE THERE IS A HUGE
J 009	wakede arimashite ***Anan jimu souchou*** no iibun wa
E 010	ASYMMETRY, PARTICULARLY MILITARY POWER, BETWEEN THE US AND
J 010	chotto oogesa kato omoimasu.// tokuni gunji bumon ni narimasu

[#3]

In this case, the interpreter started the translation after the original speaker completed the SL sentence. The interpreting procedure can be said to work as follows. First, the interpreter determines the overall structure of the original utterance and gets access to "the secretary general" by following the path that required the least effort. Next, she evokes the assumption that the intended referent of "the secretary general" is Kofi Atta Annan, who represents the United Nations, and assumes that this yields enough cognitive effects, and therefore stops any further search and produces the translation.

Although Pöchhacker and Setton explicitly described what interpreters do intuitively, their approaches constitute some descriptive and theoretical difficulties. The next section will discuss the problems generated by these claims in detail.

3. Problems

This section discusses the problems associated with Pöchhacker's and Setton's approaches, respectively.

Pöchhacker suggested that the output of SI should be acceptable by target-cultural standards. Although it is important to define the extension of pragmatic fidelity in SI, a normative approach does not provide any descriptions of how interpreters yield pragmatic fidelity in real time. In other words, it remains unclear how interpreters judge their translation to be adequate in real time. Given that examples (9) and (11) have two alternative translation candidates, similar to (10) and (12), how could Pöchhacker's approach account for the interpreter's selection?

(9) So I think perhaps the secretary general's a tad overdramatic.

(10)

a jimusouchou (= the secretary general)

b anan jimusouchou (= the secretary general Anan)

(11)

And also the administration basically promised the American people that this was going to be short and easy…

(12)

a sono/kono seiken (= the administration)

b busshu seiken (= Bush administration)

(10a) and (12a) are translation candidates that correspond formally to their originals, while (10b) and (12b) are candidates that have been assigned their intended referents. In (10) and (12), both candidates seem to be equally acceptable, and the interpreters, in practice, chose (10b) and (12b). The problem with this approach is that it does not provide any explanation for why the interpreters selected (10b) and (12b), and then rejected (10a) and (12a). We assume that the approach cannot give an explanation, because the differentiation between (10a) and (10b) or (12a) and (12b) results from the accessibility to translation candidates and linguistic antecedents. But the approach does not deal with factors that affect the interpreter's choice of candidates. Hence, the approach is not adequate, as it only partially sheds light on the interpreter's judgment in translating referent expressions in SI.

In contrast, Setton proposed a real-time processing assumption according to which interpreters make their translation acceptable through primary and secondary pragmatic processing. The question is what constitutes the relation between primary and secondary pragmatic processing. Although Setton did not mention it in detail, he seemed to assume that there is a sequential relation between them. If secondary pragmatic processing comes after primary pragmatic processing, or after the interpreters yield the overall interpretation of the original sentence, it could be easily assumed that, when interpreters start their translation while the relevant original sentence is still developing, they would translate it in a way that formally corresponds, as shown in (13) below:

(13)

E 048	EMPHASIZE, THANKS TO THE SUPPORT THAT, I BELIEVE, WE ENJOYED
J 048	sorekara, mou hitotsu, totemo juuyou nanowa, kore kyouchou shite okitainndesu
E 049	FROM THE IRAQI PEOPLE AND CONTINUE TO ENJOY FROM THE VAST
J 049	ga, watashi tachi wa iraku no hito tachi kara mo, shiji wo eta.//
E 050	OF THEM, FOR ENDING ***THIS HORRIFIC REGIME***
J 050	takusan, irakuno taihan no hito tachi wa wataxhi tachi wo shiji sshite kureta.//
E 051	THAT WAS NOT ONLY A THREAT TO US BUT WAS REALLY
J 051	sore wo motte, ***kono osoroshii seiken*** ni, todome wo sasu kotoga
E 052	EXTRAORDINARY BEASTLY TO ITS OWN PEOPLE.//
J 052	dekita nodesu. Watashitachi ni taishite kyoui dearu to iuwake dake dewa nakute,
E 053	
J 053	kokumin ni totte mo sou datta n desu.//

[#1]

In this example, the interpreter translates “this horrific regime” in line E50 in a formally corresponding way into “kono osorosii seiken (=this horrific regime)” in line J51. Setton's explanation for this would be that the interpreter could not know the overall logical value of the original sentence when he started translating it, and mentally represented “this horrific regime” by filling in only a “relation entry,” or as a sort of placeholder for a vague entity. Subsequently, he translates the phrase as “kono osoroshii seiken” in a way that formally corresponds.

However, things are not as simple as they may appear. Through the scrutiny of SI data, examples can be found in which the interpreter chooses a Japanese referring expression when translating an English referring expression, although she starts translating after the original sentence is complete. See (14) below:

(14)

E 168 **J 168**	**[C]:** WELL, I THINK THERE IS ***<u>ONE MODEL THAT THE BRITISH USE</u>***. AND hitotsu no, igirisu ga tsukatte iru
E 169 **J 169**	THAT IS BECAUSE THEY BROADLY SUPPORT THE UNITED STATES' AIMS moderu ga aru to omoi masu. kore wa igirisu wo, igirisu wa
E 170 **J 170**	TO GET AS CLOSE TO THE UNITED STATES AS THEY CAN amerika no mokuteki wo shiji shite, soshite dekirudake amerika ni
E 171 **J 171**	AND INFLUENCE THE DETAILS AND chikazukou to shite iru to iu tokoro mo arundesu ga, soshite, samazama
E 172 **J 172**	SOMETIMES THE BROAD STRATEGY OF THE UNITED STATES FROM A samazama na men de eikyou wo oyobosou to, baai ni yotte wa habahiroi
E 173 **J 173**	POSITION OF CLOSE ALLIANCE.// I THINK $\boxed{\textit{THAT}}$ IS PROBABLY THE MOST senryaku nimo eikyou wo oyobosou to, doumei kankei ni motoduite, oyobosou to
E 174 **J 174**	CONSTRUCTIVE WAY OF DOING IT.// OTHERWISE I THINK THAT COUNTRIES shiteiru to iu koto ga aru kara da to omoi masu keredomo,.// $\boxed{\textit{kore}}$ wa kensetsu teki na
E 175 **J 175**	GOT TO HAVE REGIONAL ALLIANCES, WHICH CAN apurouchi da to omoi masu.// soude nakere ba, chiiki teki na
E 176 **J 176**	HAVE SOME INFLUENCE ON THE UNITED STATES BECAUSE OF THE doumei wo sorezore no kuni ga motte ite, sore ga amerika ni taishi te eikyou

[#1]

The interpreter seemed to be able to identify the intended reference of “that” as “one model that the British use” in E168 by following the relevance-theoretic comprehension strategy. Because she starts translating just as the original sentence in E173, “I think that is probably the most constructive way of doing it,” is completed. This implies that she had a choice between two alternative translation candidates: one was the formally corresponding candidate “kore (= this/that),” and the other was the pragmatically adjusted candidate “igirisu ga tsukatte iru moderu (= one model that the British use).” As noted above, if secondary processing occurs after primary processing, the interpreter would choose the latter. The reason for this is that she starts translating after the corresponding original sentence is completed, hence she assumes to have identified its intended referent. However, she actually chose the former.

The question is why the interpreter chose the former rather than the latter. In other words, how did she evaluate the former as adequate and the latter as inadequate? Setton does not provide an explanation for this problem. Furthermore, the present study proposes that it is impossible for him to do so, because the problem is beyond the scope of Relevance theoretic account. That theory can describe how the interpreter, as a hearer, infers and identifies the intended referent of “that” in E173. However, according to this theory, a speaker would expect that what he is going to utter is optimally relevant for a hearer, because the question of whether or not the speaker judges his utterance as satisfying the optimal relevance cannot be discussed.

In sum, Pöchhacker's and Setton's approaches cannot provide an adequate explanation of why the interpreter chose one candidate as adequate and the other as inadequate.

Pöchhacker's approach lacks provision of an account of real-time processing in SI. Hence, it disregards the accessibilities of translation candidates and linguistic antecedents. In Setton's approach, the relation between the primary and secondary pragmatic processing remains unclear. Furthermore, it cannot explain why interpreters chose the candidate that corresponded formally, when she started translating the referring expression after the relevant original sentence was completed, and assumed that she was able to identify the intended referent. The next section will provide an alternative approach, and argue that the criterion proposed below is more preferable than those discussed above, by showing how it works for the above-discussed problem.

4. Alternative approach

This section proposes an alternative pragmatic criterion, and argues the following three points: (a) the criterion is defined in terms of the interpreter's attempt to reduce the overall processing cost and to adjust production to correspond to the hearers' abilities and preferences; (b) the criterion also allows for a greater flexibility in describing the interaction between SL decoding, assigning referents, and translation in TL on-line; and (c) it can provide an explanation of how the interpreter evaluates one translation candidate as adequate and others as inadequate when there is more than one candidate available.

Before introducing the alternative criterion, a discussion must determine from which standpoint this criterion should be considered. As discussed in section 3, it is reasonable to suppose that Pöchhacker's coherence-based criterion focused on hearers' evaluation of SI products. Unfortunately, this criterion does not take real-time processing into consideration. On the other hand, Setton's approach used the relevance-theoretic concept of "Optimal Relevance" as a pragmatic criterion. Although this targets human online utterance comprehension, it can be assumed to be problematic for using it directly as an acceptability criterion for the production in SI.

Sperber and Wilson (1986/1995) asserted that the hearer's task is to work out how the ostensive stimulus was intended to be relevant. According to them, the term "relevance" is defined as follows: the greater the cognitive effects, the greater the relevance; and the smaller the effort needed to achieve those effects, the greater the relevance. This reveals that the inferential communication process is governed to achieve cognitive effects, as presented in (15):

(15) Cognitive effects:
  a contradict and eliminate an existing assumption
  b strengthen an existing assumption
  c combine with an existing assumption to yield contextual implications

Considering the communication from the interpreter's viewpoint in SI, this paper cannot agree with claims regarding the hearers' task that effort must be spent to achieve cognitive effects, for the following three reasons. Firstly, Relevance theory defines the acceptability criterion in terms of the hearers' part. Secondly, simultaneous interpreters need to construct the representations that the original speaker intends to communicate as faithfully as possible. This implies that interpreters have to maximize their attention to every original utterance. Thirdly, severe time constraints impose constant translations on interpreters. That is, they are seldom provided enough time to achieve an overall interpretation of the original utterance.

An adequate pragmatic framework should fill the gap between Pöchhacker's and Setton's contrastive explanations. The acceptability criterion of translation in SI should be considered in terms of the speakers' judgment of whether or not their translation is sufficiently adequate. The following subsections will introduce an alternative acceptability criterion for production in SI.

Minamitsu and Nishimura (2005) proposed an interpreters' judgment principle of how they evaluate their translation as adequate, as presented in (16):

(16) Pragmatic acceptability criterion in SI

Simultaneous interpreters translate expressions that are evaluated as meaningful in order of the accessibility of translation candidates considering the situation, including themes of interpretations and composition of hearers.

(Minamitsu & Nishimura 2005:24)

This criterion is based on Setton's (1998) and Funayama's (2000) assertion. Setton suggested that "everything produced by the interpreter … has potential meaning and, in any event, some source in the interpreter's cognitive process" (Setton 1998, 176-77). In a similar vein, Funayama proposed a simultaneous interpreters' orientation, through which they make all their translations meaningful.

The problem is that the criterion in (16) does not provide a definition of "meaningfulness." Hence, it is difficult to explain why the simultaneous interpreter chooses one translation candidate and rejects the other when there is more than one candidate. Consider examples (17)-(19) below:

(17)

E 172	SOMETIMES THE BROAD STRATEGY OF THE UNITED STATES FROM A
J 172	samazama na men de eikyou wo oyobosou to, baai ni yotte wa habahiroi
E 173	POSITION OF CLOSE ALLIANCE.// I THINK ***THAT*** IS PROBABLY THE MOST
J 173	senryaku nimo eikyou wo oyobosou to, doumei kankei ni motoduite, oyobosou to
E 174	CONSTRUCTIVE WAY OF DOING IT.// OTHERWISE I THINK THAT COUNTRIES
J 174	shiteiru to iu koto ga aru kara da to omoi masu keredomo,.// ***kore*** wa kensetsu teki na
E 175	GOT TO HAVE REGIONAL ALLIANCES, WHICH CAN
J 175	apurouchi da to omoi masu.// soude nakere ba, chiiki teki na

[#1]

(18) ***that***

(19)

a kore / sore

b igirisu ga tsukatteiru moderu (=one model that the British use)

The question is why the interpreter chose (19a). If the interpreter had the chance to know the overall interpretation of the original in terms of timing the start of her translation, it is reasonable to assume that she might have chosen (19b). The criterion mentioned in (16) only partially sheds light on why interpreters evaluate their translation as appropriate. Theoretically, however, alternative approach needs to account for why interpreters evaluate the other translation candidate(s) as inappropriate when there is more than one translation candidate. Taking into consideration that simultaneous interpreters always translate under severe time constraints, it is plausible to assume that they tend to try and reduce their overall processing cost in SI. This assumption marks a crucial difference from the theories of usual utterance comprehension, which assume only cost-efficient access to discourse entities and contextual assumptions.

With these issues in mind, the pragmatic acceptability criterion in SI will be revised. As mentioned above, the acceptability criterion for production in SI should be defined in terms of the simultaneous interpreter's standpoint, and take into account the interpreter's attempt to reduce the overall processing cost and adjust the production to correspond with the hearers' abilities and preferences. The revised version of the criterion is presented as follows:

(20) Pragmatic acceptability criterion in SI (revised)

A translation candidate is assessed on whether it could achieve meaningfulness at the moment.

The term meaningfulness can be defined as follows:

(21) Definition of meaningfulness

A translation candidate is meaningful if:

a It is the product of reducing the overall processing cost.

b It is presumed to be compatible with the hearers' abilities and preferences.

The process of assessing the acceptability of a translation candidate can be understood as follows: an interpreter checks a translation candidate for accessibility, and then produces it when she gains the expectation that the candidate corresponds with the hearer's preferences and abilities.

In translating referring expressions, three types of translation candidates can be classified, as presented in (22):

(22) Types of candidates

A translation candidate satisfies meaningfulness in cases in which:

a It can guarantee the procedural property of the original for addressees with the least overall cost.

b It can convey the descriptive concept of the original with the least overall cost.

c It can convey the concept that is pragmatically adjusted to correspond with the addressee's abilities and preferences, even if it requires more cost.

One of the typical examples of guaranteeing procedural property in (21a) can be found in translating English pronouns into these formal Japanese correspondents. As mentioned above, the function of these pronouns is to gear hearers toward the retrieval of explicitly mentioned entities. Hence, using corresponding pronouns when translating English into Japanese yields their procedural properties. Consider the translation of the English definite noun phrase “the candidate <u>of</u> conservative values.” If it is translated as “hosyuteki na kachikan <u>no</u> kouho” in Japanese, the word “of” encodes a concept with a logical entry, but without encyclopedic entry. In other words, as Recanati (2004) argued, that concept's slot is a free variable. Hence, the interpreter chose “no” in Japanese, because that concept's procedural property also equals “of” in English.

The term “descriptive concept” in (22b) means a representation that describes a state of affairs that makes it literally true. The notion of conveying descriptive concepts is illustrated in two methods of translation. The first method is when the translation matches the encoded concept of the original. The second is when an interpreter translates a concept with an extension that is determined by the lexical property of its original, and there is no need to rely on encyclopedic assumptions. Consider the translation of the English phrase “the establishment <u>of</u> democracy” into Japanese as “minshu shugi <u>wo</u> jousei suru.” Here, the syntactic relation between “the establishment” and “democracy” is interpreted as the head and its objective complement, respectively, and subsequently it is assumed that “the establishment” takes an argument and that “democracy” fills it. The interpreter does not need to access encyclopedic assumptions because the extension of the logical relation between “the establishment” and “democracy” can be determined by their lexical properties. Since “minshu shugi <u>wo</u> jousei suru” in Japanese reflects the logical relation of its original, it can be concluded that the translation conveys the descriptive concept successfully.

The pragmatically adjusted concept in (22c) is reorganized to correspond with the potential hearers' abilities and preferences. Recall Pöchhacker's assertion that the production of SI should be acceptable by target-cultural standards, and that the way in which the concept is reorganized varies from situation to situation. However, conveying a pragmatically adjusted concept sometimes requires more cost than the others, because interpreters are obliged to access not only lexical items in the SL and TL, but also contextual assumptions on the topic of the ongoing utterance, such as the theme of the conference, and so on.

Therefore, it may be presumed that decoding, identifying the speaker's intended meaning, and translation, including the identification of the intended meaning, do not proceed sequentially, but in parallel. And, moreover, that processes are adjusted mutually, so as to achieve the presumption that the translation is sufficiently meaningful. The advantage of this proposal is threefold: firstly, it allows for a greater flexibility in describing the interaction between how interpreters comprehend original utterances and when they start translating; secondly, there is no need to assume discrete sequential processing, as Setton proposed; and thirdly, it provides an explanation of why the interpreter evaluates one translation candidate as adequate and others as inadequate when there is more than one candidate available. Consider the next example:

(23)

E 048	EMPHASIZE, THANKS TO THE SUPPORT THAT, I BELIEVE, WE ENJOYED
J 048	sorekara, mou hitotsu, totemo juuyou nanowa, kore kyouchou shite okitainndesu
E 049	FROM THE IRAQI PEOPLE AND CONTINUE TO ENJOY FROM THE VAST
J 049	ga, watashi tachi wa iraku no hito tachi kara mo, shiji wo eta.//
E 050	OF THEM, FOR ENDING ***THIS HORRIFIC REGIME***
J 050	takusan, irakuno taihan no hito tachi wa wataxhi tachi wo shiji sshite kureta.//
E 051	THAT WAS NOT ONLY A THREAT TO US BUT WAS REALLY
J 051	sore wo motte, ***kono osoroshii seiken*** ni, todome wo sasu kotoga
	EXTRAORDINARY BEASTLY TO ITS OWN PEOPLE.//
E 052	dekita nodesu. Watashitachi ni taishite kyoui dearu to iuwake dake dewa nakute,
J 052	
E 053	kokumin ni totte mo sou datta n desu.//
J 053	

[#1]

Example (23) is a mixed type, defined by (22a) and (22b). Here the translation procedure works smoothly. The interpreter first decodes “this horrific regime” in line E50 as an NP, which functions as follows. First, “this” gears the interpreter to access the previously mentioned entities to search for the intended referent that is constrained by the succeeding

NP, which re-describes a previously mentioned antecedent. Inferring from the timing of the start of translation, the interpreter could not identify the intended referent, since she translates it as "kono osorosii seiken (=this horrific regime)" in line J50, in which "kono" guarantees its procedural property of the original "this," and "osoroshii seiken" matches the concept of the original "horrific regime." Therefore, the interpreter would evaluate this translation candidate as meaningful.

(24)

■	**[M]:** Mr. Cobolt, does the British government have any strategy to sway the media in its favor? (In Japanese)
E 093	**[C]:** I THINK THAT WE, TO A GREAT EXTENT IN ***THIS COUNTRY*** , DID MUCH
J 093	Osoraku watashi tachi wa, ima
E 094	THE SAME AS THE UNITED STATES DID, THOUGH I THINK THAT
J 094	***igirisu*** ni oite wa, amerika to onaji youna koto wo daitai ni oite wa
E 095	ONE COULD SAY THAT THE MEDIA COVERAGE HERE WAS
J 095	yatta to omoimasu.// ma, media

[#1]

Example (24) is defined by (23c). In this case, it could be assumed that the intended referent of "this country" in line E93 is manifest as "igirisu (= England)" for the interpreter. The interviewee, Rear Admiral Mr. Richard Cobolt, is a retired admiral of the UK Royal Navy, and he was in a studio in London. In addition, the interviewer explicitly mentioned "igirisu (= England)" in his question. Therefore, she could assign the reference to England with ease, and evaluated its translation as meaningful. Even if the interpreter had simultaneously activated the literally corresponding candidate "kono kuni" and the candidate that is assigned the intended referent, she would have chosen the latter. Although the latter has four syllables, as many as the former, the latter has the advantage that it corresponds with the hearers' abilities and preferences by elaborating the referent and contributing to reduce the hearers' processing cost. This implies that the literally corresponding candidate is evaluated as inadequate.

In this case, it can be assumed that when the interpreter translates a referring expression by assigning its intended referent, there is a strong tendency that the most recently mentioned entities are more accessible than those mentioned earlier. Consider (25) below:

(25)

E 001	**[SI]**: I THINK THERE'S BEEN A VERY SERIOUS BREAKDOWN AS
J 001	Soudesu ne,
E 002	FAR AS THE REACTION TO ***THE BUSH ADMINISTRATION***'S HANDLING
J 002	koko dewa ***bussyu seiken*** no
E 003	OF THIS.// THEY BASICALLY STARTED OUT SAYING THAT WE WERE
J 003	koushita jitai no toriatsukai kata ni kanshite wa,
E 004	GOING INTO IRAQ BECAUSE OF WEAPONS OF MASS DESTRUCTION,
J 004	ookina, ima, houkai aruiwa
E 005	BECAUSE OF THE DIRECT THREAT TO AMERICAN NATIONAL
J 005	bunri ga mirarete imasu.// mazu saisyo wa,
E 006	INTERESTS.// THEN THEY GOT TO IRAQ AND DISCOVERED
J 006	tairyou hakai heiki, korega amerika no kokueki, kochirawo
E 007	THAT THAT WASN'T, THAT THEY WERE NONE THERE, THERE
J 007	odokasu to iu koto de, itraku ni haitta wake desu ga, irakuni itte ik, hairi
E 008	APPEARED TO BE NONE, AND THE THREAT SEEMED TO FADE AWAY.//
J 008	masuto, jissai niwa sore wa mitsukaranakatta.// Soshite
E 009	AND NOW WE ARE TALKING ABOUT SAVING IRAQ FROM SADDAM
J 009	sono kyoui mo usurete itta toiu koto ni nari, imadewa, iraku wo
E 010	HUSSEIN WHICH IS A PERFECTLY LEGITIMATE THING TO DO, BUT
J 010	sadamu husein kara tasukeyou to iu, souiu riyuu
E 011	WE HAVE CHANGED OUR DIRECTION IN THE COURSE OF THIS
J 011	ni natte imasu.// koremo, seitousei no aru mono desukeredomo, shikashi
E 012	PROCESS.// AND ALSO ***THE ADMINISTRATION*** BASICALLY PROMISED
J 012	koushita purosesu no aida de, wareware houkousei wo kaete ikimashita.//
E 013	THE AMERICAN PEOPLE THAT THIS WAS GOING TO BE SHORT AND
J 013	sorekara mata ***bussyu seiken*** wa, amerika no kokumin ni, kihon

[#2]

Example (25) also falls under the definition of (23c). The interpreter translated "the administration" in E12 as "bussyu seiken (=the Bush administration)" in J13. This shows that she could identify the intended referent of the original as "the Bush administration" in E2 with ease, and evaluated it as meaningful. Even if the literally corresponding candidate "sono seiken (=the administration)" and the candidate with assigned intended referent had been evoked simultaneously, she would have chosen the latter, since the latter candidate has the advantage that it corresponds with the hearers' abilities and preferences by elaborating the referent. Hence, the literally corresponding candidate was evaluated as inadequate. It can therefore be assumed that the textual distance between a referring expression and its antecedent is unrelated to the interpreter's accessibility of the linguistic antecedent. This implies that the accessibility of the intended referent varies individually.

5. Conclusion

This paper has two main aims: first, to consider how interpreters infer the translation of referring expressions as adequate in real time; and second, to consider how interpreters determine one translation candidate to be adequate and others to be inadequate when there is more than one candidate available mentioned in section 1. Considering two existing pragmatic approaches to production in SI, namely, the coherence-based approach and the relevance-based approach, Pöchhacker's coherence-based approach did not provide adequate explanation because it defined only the extension of pragmatic fidelity, and that Setton's relevance-based approach was less than convincing regarding the processing procedure. Moreover, the latter could not explain why interpreters choose one translation candidate and reject others when there is more than one candidate available.

The paper introduced meaningfulness-based account as an alternative approach. Meaningfulness was defined in terms of the interpreter's attempt to reduce overall processing cost and to adjust production to correspond with the hearers' abilities and preferences. From what has been discussed above, the following can be concluded regarding the major characteristics of this alternative account.First, there is no need to assume discrete sequential processing in SI. Second, the criterion allows for greater flexibility in describing the interactions between decoding, assigning referents, and translation in real time. Third, it explains why the interpreter evaluates one translation candidate as adequate and others as inadequate when there is more than one candidate available.

REFERENCES

Back, K. (1994). “Conversational Implicature.” *Mind and Language* 9, 124-62

Carston, R. (2002). *Thoughts and Utterances:* The Pragmatics of Explicit Communication. Oxford: Blackwell.

Funayama, C. (2000). “Assessing Features Constituting Cognitive Aspect in Simultaneous Interpreting.” In K. Miyahata (Ed.) *Cognitive Linguistic Analysis of Information Flow in Simultaneous Interpreting: Grants-in-aid for scientific research reports #10610518,* 3-26. (In Japanese)

Gile, D. (1995). *Basic Concepts and Models for Interpreter and Translation Training.* Amsterdam/ Philadelphia: John Benjamins.

Gundel, J.K. (1996). “Relevance Theory Meets the Giveness Hierarchy.” In T. Fretheim and J. K. Gundel (Eds.) *Reference and Referent Accessibility.* Amsterdam/ Philadelphia: John Benjamins, 141-154.

Minamitsu, Y. and T. Nishimura. (2005). “Assessing real-time translation process in Simultaneous Interpreting: the case of NP_1 of NP_2” In C. Funayama (ed.) *Micro Analysis of Utterance Comprehension Based on Simultaneous Interpreting Data: Grants-in-aid for scientific research reports #15520262,* 17-31. (In Japanese)

Pöchhacker, F. (1995). “Simultaneous interpreting: A functionalist approach.” *Hermes Journal of Linguistics* 14, 31-54.

Recanati, F. (2004). *Literal Meaning.* Cambridge: Cambridge University Press.

Seleskovitch, D. (1968/1978). *Interpreting for International Conference.* Washington, D. C.: Pen and Booth.

Seleskovitch, D and M. Lederer. (1989/1995). A Systematic Approach to Teaching Interpretation. The Registry of Interpreters for the Deaf.

Setton, R. (1999). ***Simultaneous Interpretation: A cognitive-pragmatic analysis.*** Amsterdam/ Philadelphia: John Benjamins.

Srtton, R. and A. Dawrant. (2016). ***Conference Interpreting A Trainer's Guide.*** Amsterdam/ Philadelphia: John Benjamins.

Sperber, D. and D. Wilson. (1986/1995). ***Relevance: Communication and Cognition.*** Oxford: Blackwell

SIMULATNEOUS INTERPRETING DATA

# 1	4/24/2003	NHK BS-1	15’ 32” English into Japanese
# 2	9/12/2003	NHK BS-1	25’ 40” English into Japanese
# 3	9/26/2003	NHK BS-1	15’ 32” English into Japanese

1) Skopos means the purpose of translational action.

2) According to Pöchhacker, it means a group culture defined by the shared background and common expertise of participants of the conference.

3) We simplify the original SI corpora, disregarding synchronicity, because we focus on the comparison between referring expression in the SL and its translation.

4) Skopos theory suggests that the pragmatic fidelity is achieved by intertextual coherence, the relationship of same communicative function between source and target text.