

**Prosodic pointing: from pragmatic
awareness to pragmatic competence
in Chinese hearers of L2 English**

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Abstract

This thesis examines one particular way in which we might raise awareness among Chinese L2 hearers of the importance of interpreting paralinguistic behaviour and so enhance their pragmatic competence. It adopts a cognitive-pragmatic approach to instructed L2 oral comprehension informed by relevance theory and show how exposure to one type of paralinguistic behaviour – prosodic pointing – contributes to the development of increasingly sophisticated interpretive strategies.

In Chapter One, I propose that L2 instruction should focus less on teaching ‘listening’ and more on developing pragmatic competence. This focus entails a multimodal approach to L2 learning and teaching. In Chapter Two, I introduce relevance theory and show how it can accommodate a view which focuses on (i) the hearer’s end of interaction and (ii) the role of the speaker’s paralinguistic behaviour in the context of fine-tuning L2 hearers’ interpretive competence.

Chapter Three introduces the type of ostensive paralinguistic behaviour the thesis focuses on: contrastive stress. I account for the comprehension of contrastive stress in relevance-theoretic terms and argue that it is interpreted by virtue of its interaction with co-speech pointing gestures, such as head movements and facial expressions. Adopting a multimodal perspective, I outline a rationale for looking at contrastive stress in its multimodal context: what I call *prosodic pointing*. I introduce my focus on exposing Chinese L2 hearers to prosodic pointing to develop their ability to infer (dis)agreement.

In Chapter Four, I provide a definition of pragmatic competence as ostensive-inferential competence presupposing pragmatic awareness and metapragmatic awareness (Ifantidou, 2014). I highlight my original contribution in focusing on inferential comprehension in L2 hearers and in integrating paralinguistic behaviour (i.e. prosodic pointing) into the Noticing-as-Ostensive model of instruction and formulate my main hypothesis: exposure to prosodic pointing will play an important role in setting the stage for Chinese L2 hearers’ recognition of relevance, raising their pragmatic and metapragmatic awareness and improving their pragmatic competence.

In Chapter Five, I introduce the intervention study used to test the hypothesis, outlining my methodologies and a mixed methods triangulation research design. Chapter Six presents the data analysis and results of the intervention. Finally, in Chapter Seven, I discuss and interpret the results in the light of the hypothesis and theoretical implications. There is ample evidence of the intervention's effectiveness in enhancing Chinese L2 hearers' ostensive-inferential competence. I also present further evidence that exposure to prosodic pointing is particularly relevant to Chinese L2 hearers.

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I declare that the research contained in this thesis, unless otherwise formally indicated within the text, is the original work of the author. The thesis has not been previously submitted to this or any other university for a degree and does not incorporate any material already submitted for a degree.

Pauline Madella

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Chapter One

Pragmatic competence in the L2 hearer and a multimodal approach to L2 learning

1.0 Introduction

In this chapter, I develop an argument for re-defining listening instruction from a pragmatic competence perspective and for adopting an inclusive multimodal approach to second language learning and teaching. This chapter is key to understanding my stance as deeply anchored in pragmatics and in models of second language acquisition (SLA) reflective of communication as essentially a multimodal phenomenon.

1.1 L2 listening comprehension and L2 pragmatics

This thesis investigates second language (L2)¹ listening from the perspective of pragmatic competence. The literature specialised in researching and teaching L2 language listening shows that the mental processes that listening comprehension involves are yet to be fully understood (Vandergrift and Goh, 2012; Rost, 2016). I suggest that this is due to L2 listening having been explored largely independently of developments in cognitive pragmatics. Interestingly enough, at the same time, the relationship between L2 pragmatics and listening development has also been overlooked in instructional pragmatics studies.

L2 pragmatics studies, including studies in interlanguage and instructional pragmatics, have long focused on developing English learners' metapragmatic awareness and pragmatic behaviour as speakers, thereby neglecting the development of their metapragmatic awareness and pragmatic behaviour as listeners (Padilla Cruz, 2013ab). I put forward the thesis that L2 listener behaviour should be learned as part of developing L2 interpretive/pragmatic competence, on the basis that the activity of

¹ Throughout the thesis, I will use 'L2' to refer to second language – or English – with the exception of Second Language Acquisition (SLA).

listening has everything to do with pragmatic competence. As this work will show, focusing on developing L2 learners' pragmatic behaviour as listeners using the lens of a cognitive linguistic theory of comprehension addresses the existing knowledge gaps and contribute to the development of both instructed pragmatics and listening studies. With this end in mind, I will first review the L2 listening literature and dispel some of the major misconceptions likely to have obstructed the possibility of conceiving listening from a pragmatic approach. Adopting a cognitive-pragmatic approach to L2 listening will then involve redefining listening, the L1/L2 listener and listening input so as to reflect oral comprehension as a multimodal phenomenon. One potential reason behind the lack of research centred around the relationship between L2 pragmatic competence and listening ability development seems to be limited breadth and depth of knowledge of the cognitive dimension of pragmatics and the development of cognitive theories of comprehension on the one hand, and a misconception around listening activities and listening input on the other. Before reviewing the literature in 1.3, I will dedicate the next section to defining (pragmatic) competence as used in this thesis in the light of Chomsky's comparison between competence and performance to avoid any confusion as to what I mean by pragmatic *competence*.

1.2 Pragmatic competence

Prior to providing my definition of pragmatic competence, I must first acknowledge and discuss Chomsky's use and definition of linguistic competence in his work (1965, 1980). Chomsky's view on competence (1965, 1980) is best understood in the light of his competence/performance distinction. He describes 'competence' as the underlying knowledge of a language or a 'body of knowledge of how to use language' (Carston, 2002, p. 10), which he distinguishes from 'performance', characterised as the 'actual use of language in concrete situations' (Chomsky, 1965, p. 4; 1967/2006, p. 102). Competence is a system that is applied or put to use in performance – the actual use of language (Chomsky, 1965). In *Rules and Representations* (1980), Chomsky (1980, pp. 224-225) defines 'pragmatic competence' as:

Knowledge of conditions and manner of appropriate use, in conformity with various purposes. Thus we may think of language as an instrument that can be put to use. (...)

We might say that pragmatic competence places language in the institutional setting of its use, relating intentions and purposes to the linguistic means at hand.

In that sense, Vandergrift and Goh's use of the term 'knowledge' (2012) as seen in the literature reviewed below, resonates with the Chomskyan definition of competence. Vandergrift and Goh (2012) describe pragmatic knowledge as one of the 'data banks' and sources of pre-existing knowledge applied to the literal or semantic form of a spoken message.

I must stress in this section that I do not use the term 'competence' in the Chomskyan sense. I use it in relevance-theoretic terms, namely as a 'type of cognitive performance' (Ifantidou, 2014, p. 1). Relevance-theoretic pragmatists refer to pragmatic competence as a relevance-driven comprehension heuristic, a sub-module of the mind dedicated to 'doing' the interpretive work in online communication. This cognitive mechanism dedicated to comprehension is not a specifically linguistic performance system but one that is exploited for online processing of ostensive stimuli generally (Carston, 2002, pp. 10-11). This, as we will see, is key to explaining why relevance theory is in line with my approach to language learning, and why it is the best suited theory to base my study upon. Drawing on the relevance-theoretic definition, I understand pragmatic competence as *active* competence. Later in the thesis, this definition of pragmatic competence will be refined in the light of the relevance-theoretic comprehension procedure and in relation to what is tested in the present research.

1.3 A review of the L2 listening literature

When describing their cognitive model of listening comprehension as a 'working model', Vandergrift and Goh (2012, p. 38) emphasise that 'currently, there is no comprehension theory that fully explains either the production or comprehension side'. As Vandergrift and Goh (2012) point out, there are not many models of listening comprehension out there, potentially as a result of listening being largely seen as 'an invisible mental process making it difficult to describe' (Vandergrift, 2007, p. 191). Listening has traditionally received little attention compared to writing, reading and

speaking (Goh, 2008; Vandergrift and Goh, 2012; Rost, 2016). It was long considered the ‘sleeping partner in the business of oral communication’ (Vandergrift and Goh, 2012, p. 9) and it remains the least researched of the four skills (Rost, 2016). Vandergrift (1999) and Goh (2008) were pioneers in exploring the cognitive processes related to comprehension (Padilla Cruz, 2013a). They have been concerned with the cognitive dimension of listening: that is, the mental work and processes at play in input processing and meaning interpretation. Yet, the reason for my distrust of current listening models and the L2 listening literature generally is precisely that it focuses on listening and does not sufficiently emphasise the more fundamental and precursor role played by pragmatics in oral comprehension. My intuition is that the L2 listening literature has it backwards. For me, pragmatic mechanisms are a prerequisite for listening and listening activities presuppose pragmatic reasoning. Pragmatic processing is not a part of the listening comprehension process; listening is a part of the pragmatic comprehension procedure. The claim that I am therefore making is that this, much-needed, comprehension theory that fully explains the comprehension side of face-to-face interactions belongs in cognitive pragmatics. Thus, not only is there room for investigating alternative cognitive models of listening comprehension, but I claim that there is a need to use what we know from cognitive pragmatics in such investigation. The following sheds light on how misinformed the L2 listening literature is about pragmatics generally, and cognitive pragmatics particularly, while showing why my line of investigation radically diverges from that found in the L2 listening literature.

In Vandergrift and Goh’s cognitive model of listening comprehension (2012, p. 39), pragmatic knowledge is ‘applied’ in the utilisation phase of the model. It is described as one of the stored knowledge sources or ‘data banks’, which the listener relies on to ‘further interpret utterances’ mostly by means of enriching and elaborating the literal message (2012, pp. 23-24). Similarly, Dipper, Black, and Bryan (2005, p. 417) describe this phase as an “‘enrichment’ of skeletal conceptual information derived from the linguistic input, using pragmatic principles’, while Rost (2016) depicts it as an extra layer of information. Although Rost (2016) dedicates a whole chapter to pragmatic processing, the concluding paragraph of the chapter demonstrates a lack of familiarity with cognitive pragmatics: he explicitly associates the pragmatic

dimension of listening with the utilisation of social knowledge and distinguishes it from the internal cognitive processes involved in listening. In the same vein, Vandergrift and Goh (2012, p. 24) describe pragmatic knowledge as ‘often culturally bound and, therefore, closely related to sociocultural and sociolinguistic knowledge’.

What is just as problematic is that these accounts give the speaker a very minimal presence and role in the comprehension process. They imply that the speaker’s behaviour and speaker’s intentions only affect comprehension in the final phase of the process, while the comprehension process as a whole should be centred around an intention-based model of communication. The listener’s connection with the speaker is expressed in somewhat vague terms as ‘a sense of engagement with the speaker and the speech event’ by Rost (2016, p. 86). The described accounts of pragmatic knowledge, pragmatic principles and pragmatic processing all agree in showing very little understanding of what exactly goes on in the listener’s mind when it processes speaker input. They also show little awareness of the cognitive dimension of pragmatics and its explanatory potential for the cognitive dimension of listening. Speaker input and cognitive processes are intrinsically related. Yet, the accounts offered in the literature fail to acknowledge or appropriately reflect the speaker’s authorship, and this is likely to result in the L2 listener’s disengagement from the speaker. These elements shed light on the literature’s limited knowledge of the nature of cognitive pragmatics: pragmatics is not to do with the cognitive dimension of listening, it seems.

The so-described role of pragmatic knowledge to further interpret utterances causes more scepticism. How is it that pragmatic processing is only used to *further* interpret utterances? It should be there in the model from the start, prompting and guiding the interpretation of utterances, triggered by the speaker’s behaviour and the speech event or communicative act. This is what an utterance is: a speech event or act of communication (Sperber and Wilson, 1986/1995). Although ‘utterance’ is used, it is mostly treated as sentence and amalgamated with text: ‘the emerging meaning of the text or utterance’ (2012, pp. 24-25) as if processed in the same way. In more recent literature (Newton et al., 2018, p. 198), utterances are still described as ‘spoken text’. The literature, although expert in the field of instructed listening, demonstrates a lack

of expertise in cognitive pragmatics. Cognitive pragmatics explores and explains what goes on in the listener's mind, the mental processes triggered and relied on in online communication and the role of the speaker's input and behaviour in triggering those mental processes. It therefore has key implications for the study of listening instruction. Although the current models (Vandergrift and Goh, 2012; Rost, 2016) emphasise the importance of the listener's connection to the speaker and the notion of speaker's intended meaning, this connection is not fully exploited. They stress that listening is about interpreting speaker's intended meaning, yet they seem to miss the important fact that the speaker's inputs and communicative behaviour prompts and guides the interpretative work. The social act and outcome of listening has everything to do with pragmatics and the listener-speaker connection, but this connection is one that belongs to the realm of 'social cognition'. Thus, it should be there, visible, from the start of the pragmatic comprehension procedure as its underlying principle.

The guiding line of my argument for a pragmatic approach to listening is that there is more to knowing how to use language than linguistic competence. Understanding language in terms of what it communicates involves a tremendous part of pragmatic competence, which for now will be described in simple terms as the ability to interpret language beyond the realm of linguistically coded communication. This idea, in fact, is acknowledged by Vandergrift and Goh (2012, p. 24): 'Listening comprehension involves far more than just understanding words.' In a similar vein, Rost (2016, p. 67) starts off his chapter on pragmatic processing by stating that: 'there is even more to listening than linguistic decoding and semantic processing... There is an additional, overarching component which we will call pragmatic processing.' However, if it is overarching, it cannot be described as an additional layer or dimension of the listening process. It *is* the process, from start to finish. Comprehension is driven and constrained by pragmatic mechanisms. He adds (2016, p. 67): 'the ability to understand another speaker's intended meaning, in context, can be considered a primary goal of listening and a primary objective in learning to listen in an L2.' Yes, it should be. Yet, what the literature has done is tell the reader that pragmatic processing is important and consistently fail in showing how.

A closer look at Vandergrift and Goh's 'two-way' (interactive) listening comprehension process (2012, p. 39) integrating both the comprehension and the production sides of interaction sheds further light on the misunderstanding. Although the speaker's start of the production process is characterised by their communicative intention and intended meaning, the listener's start of the comprehension process is not. It is instead characterised by the decrypting of linguistic input: sound, lexical and semantic processing. But the processing and interpretation of linguistically encoded input is never done without reference to the speaker's intentions. In fact, the listener is only concerned with the meaning of the words uttered insofar as they relate to what the speaker means by them (Sperber and Wilson, 1986/1995). This provides an important element in showing why a cognitive pragmatic account of the mental processes at play in utterance interpretation is essential if one wants to accurately account for the comprehension process. The listening model (Vandergrift and Goh, 2012, p. 39), as it is, implies that the listener's interest in and interpretation of the speaker's communicative intention does not guide the process as a whole. Yet, as Rost (2016) points out, it is a primary goal of listening to interpret and understand another speaker's intended meaning. With this in mind, both the speaker's production process and the listener's comprehension process ought to start from the acknowledgment of the speaker's communicative intention in producing an utterance. That is why pragmatic processing is overarching and listening is not. Thus, I suggest that the listening comprehension process be described as pragmatic comprehension procedure.

Vandergrift and Goh (2012) admit that the relation between listening and pragmatic processes is not fully understood and has yet to be further investigated. The absence of research showcasing the connection between listening and pragmatic comprehension as a crucial one has visible consequences. I suggest that it helps explain persistent pragmatic problems typical of L2 listeners. These are characterised by overreliance on linguistic input and bottom-up processing, lack of attention to suprasegmental and non-linguistic phenomena (i.e. prosodic and gestural features) generally used in top-down processing, and difficulties to read their interlocutor's mind (Padilla Cruz, 2013a). I endorse the view that those pragmatic problems also described as 'less sophisticated interpretive strategies' of L2 learners (Padilla Cruz, 2013a, p. 121) are, to a great extent, a consequence of how they learn to behave as L2

listeners. Expecting L2 learners to rely on pre-existing pragmatic knowledge rather than read the speaker's real-time contextual cues available to them is not likely to induce this connection to the speaker so fundamental to their ability to read their interlocutor's mind. Emphasising the importance of linguistic input and bottom-up processing is not going to help with that either.

This takes me to another fundamental element missing from the L2 listening literature, which further demonstrates the need to rethink listening instruction. While the listening literature does not omit sound patterns and visual elements of the speaker input, their mention is far from doing those elements justice. In Rost (2016), sound patterns (i.e. segments, phonemes, connected speech) and suprasegmental features (i.e. intonation contours, voice modifications) are both labelled under the term 'linguistic processing'. The pragmatic nature of the latter is only briefly addressed and encapsulated as 'emotional tones' (Rost, 2016, p. 25). These communicate what Crystal (1975, p. 165) refers to as 'affective' meaning. At the end of his unit on linguistic processing, Rost (2016) dedicates one paragraph to those paralinguistic features, in which paralinguistic elements are mostly reduced to 'kinesics'. In this unit, vocal non-verbal features are treated independently from gestural ones. What this shows is that the L2 listening literature largely assumes a linguistic account of prosody, and it does not acknowledge that the linguistically oriented account of prosody is not the only one that has been suggested.

In the linguistics literature, it has been widely agreed that intonation ranges along a continuum from 'natural' to purely linguistic (Wharton, 2009). Bolinger (1983c, pp. 106-108) strongly favours the idea that although we may feel some aspects of intonation to be linguistic, those aspects can be traced back to their natural origins:

Intonation... assists grammar – in some instances may be indispensable to it – but it is not ultimately grammatical... If here and there it has entered the realm of the arbitrary, it has taken the precaution of blazing a trail back to where it came from.

I too favour the natural and pragmatic account of prosody for reasons which I will develop in the second half of this chapter. Whether we support the predominantly

natural view or the predominantly linguistic view of prosody, the point is that intonation and other non-verbal elements must be addressed and introduced to the L2 learner in a way that acknowledges the complexity of the matter. The little coverage dedicated to vocal non-verbal cues on the one hand and visual ones on the other is not in line with the literature's claim that 'listening comprehension involves far more than just understanding words' (Vandergrift and Goh, 2012), and that 'there is even more to listening than linguistic decoding' (Rost, 2016, p. 67). In Rost (2016), paralinguistic features appear at the bottom of an 11-item list of spoken language features (2016, p. 22). Vandergrift and Goh (2012, p. 33, p. 220) mention the listener's use of non-verbal cues to signal comprehension, but barely acknowledge their use in the interpretative work. Interestingly, also, prosodic and other non-verbal cues are never reflected as perceived and belonging together.

The point I am making here is that it is easy to see how the way paralinguistic elements have been treated and the way elements of language have been compartmentalized in the L2 literature contribute to conveying the idea that paralinguistic input is ancillary and not worth expanding on. It contributes also to 'our temptation so to classify certain aspects of a transaction as the central message and other aspects only serving as modifiers' (Crystal, 1975, p. 164). This attitude, I feel, has played a massive role in keeping L2 listening research away from L2 pragmatics. One nonetheless insightful comment is offered by Rost (2016, p. 42):

It is useful to consider how visual information enhances linguistic input, or distorts it, or replaces it, and sometimes even contradicts it.

Surely this suggests that paralinguistic inputs are an integral part of how utterances are constructed and interpreted and that vocal and visual inputs to the comprehension process must be integrated into a holistic account of comprehension. Rost (2016) mentions studies that have shown the important role of non-verbal behaviours in communication, inviting the reader to go back to the early days of pragmatics and referring them back to Birdwhistell (1970) and Goffman (1981). It is unfortunate however that he does not go as far as exploring the relationship between non-verbal behaviours and pragmatics himself. This is precisely what interests me here, the

paralinguistics-pragmatics area of knowledge that is missing from the literature and which justifies revisiting ‘listening’. The bare acknowledgement of suprasegmentals and other paralinguistic features pragmatic in nature in the L2 listening literature is consistent with the general lack of attention paid to those suprasegmental and paralinguistic features by L2 learners as observed by Padilla Cruz (2013a). Although Vandergrift and Goh’s (2012) emphasise their model of listening comprehension as representative of interactive listening, I argue that, while their model does not work, there is no such thing as listening comprehension in online interaction anyway. Instead, considering the importance of non-verbal behaviours and taking a serious look back on the early days of paralanguage can give us directions as to how to rethink and redefine ‘listening’. I have up to this point referred to learners as listeners, the activity they engage in as listening, and the input they are exposed to as listening input. Those word choices, however, are misleading and, in the light of the above considerations as well as those to come, shall be redefined.

1.4 L’œil écoute

I do not very much like the term ‘listening’. It seems to me potentially misleading: it gives the impression that listening is a sufficient condition for *hearing what our interlocutor is saying*. The receiver’s end of a communication encounter relies as much on visible cues as audible ones and interpreting speaker meaning is as much an activity for the eyes as it is one for the ears. In the context of art, French poet Paul Claudel (1868-1955) introduced the idea of total receptivity through his essay *L’œil écoute* (1946), in which he wrote about his experience interpreting artwork as a multichannel phenomenon. His original idea was that, when exposed to artwork, the ears were as alert as the eyes, and that receptivity was immediate and total. This inclination towards a multidimensional interpretation of art comes from his work and life as a poet: he would contemplate a piece of art from the perspective and imagination of the poet that he was. He would experience it as a poet, with the soul of a poet. Claudel’s vision of how to approach art and make full sense of what he described as a text in movement to be read with the eyes and with the ears has deep implications for the interpretation of speech events. The oxymoron *L’œil écoute* used as the title of Claudel’s essay (1946) precisely justifies a redefinition of listening in the context of L2 oral

comprehension instruction. It is also because the act of listening is not an end in itself but only a part of the work of interpretation of an art piece or an utterance. In his article *Viewing comprehension: 'L'oeil écoute'* (1979), Riley adopts Claudel's perspective, rejecting the overcategorization of language and linguistic phenomena on the basis that it prevents L2 learners' ability to effectively use language to communicate. Riley (1979, p. 145) transfers Claudel's oxymoron to the domain of L2 comprehension, in advocating for a global approach to oral comprehension or what he calls 'viewing comprehension'. Riley (*ibid.*) defends the point that comprehension involves more than listening and the visual element of what is communicated is not just 'a sort of gloss on the verbal component.'

As hinted earlier in this chapter, terminology has significantly contributed to non-verbal features being segregated as para-, non- or extra-linguistic features and seen as a 'frill' (Nina Curt, 1976, p. 1) or an 'add-on' to speech (Kendon, 2014b, p. 4). It is certainly true of paralinguistics as the rest of the chapter will show, but it is also true of listening, listener and listening input, whose use almost inhibit us from integrating visual non-verbal aspects of language into the picture. On the basis of my emphasis on pragmatic competence, I will use the words 'interpreting' and 'L2 interpreter' interchangeably with the relevance-theoretic term '(L2) hearer'. 'Interpreting' conveys the idea of an active competence and it avoids giving prominence to any of the verbal, audible or visible components, as the interpretive work involves paying attention to *all* components. Interpreting implies that there may be more than one interpretation and that the comprehension process is a matter of evaluating one's comprehension and selecting one among possible interpretations. Redefining listening and appreciating the fact that comprehension involves access and attention to visual elements as well as verbal and vocal ones, necessarily means that listening input needs to be redefined accordingly.

1.5 Paralinguistic behaviour and the multimodal approach to language learning

We speak with our vocal organs, but we converse with our whole body.

(Abercrombie, 1968, p. 55)

We have seen earlier in this chapter that listening input as presented in the L2 literature is primarily linguistic and linguistic processing is represented as fundamental to learners' understanding of an utterance. We have also seen that suprasegmental inputs such as intonation features were classified under linguistic processing, although, as it has been pointed out, 'prosodic inputs to the comprehension process range from 'natural' to the purely linguistic' (Wharton, 2009, p. 140). Like Bolinger (1983a), I favour the view of prosody as a largely natural phenomenon, which belongs in the realm of pragmatics. As Wharton (2009, p. 146) points out, utterances are 'a composite of linguistic signals, natural signals and natural signs² which interact in complex ways to yield a hypothesis about the speaker's meaning'. What this means essentially is that we cannot overlook the fact that what utterances communicate can be 'nebulous, contextually shaded and hard to pin down in conceptual terms.' (Wharton, 2009, p. 146). Accounts of how we go about interpreting those utterances, including in the L2 comprehension instruction literature, must accommodate those points. While Rost (2016) chose not to explore some of the insights of early pragmatics into the importance of non-verbal behaviours in interactive communication, the following considers the evolution of paralinguistic from its first introduction by Trager in 1958, in relation to pragmatics. It will not only allow me to offer a definition of paralinguistic phenomena, or at least clarify which one I adopt in my work and why, but it will also demonstrate the importance of redefining listening input in the light of those paralinguistic behaviours, which are found to be a primary facet of that input.

'Paralanguage' was originally introduced to refer to how something is said, rather than what is said (Trager, 1958). In *Paralanguage: a first approximation* (1958), Trager described paralanguage as centred around voice modification and vocal features, excluding gestural ones. At the same time, studies on the use of kinesics took on a life of their own and the term kinesics was used to refer to all bodily movements, including those that are not intentionally communicative (Abercrombie, 1968). Pennycook (1985) refers to vocal features as paraverbal and part of paralanguage. The initial narrow definition of paralanguage as only involving vocal non-verbal features, gradually broadened so as to cover all aspects of non-verbal communication

² See Chapter Three section 3.2 for Wharton's account of the difference between natural signals and natural signs.

(Abercrombie, 1968; Loveday, 1982; Houston, 1984; Pennycook, 1985). I adopt Abercrombie's terminology and definition of 'paralinguistic phenomena or behaviour' (1968, p. 65). Abercrombie strongly disliked the term *paralanguage* as he felt it was encouraging a dismissive attitude towards its integration into a general view of communication and a strong divide between language per se and elements of language that, for many, belonged 'alongside language'. Within paralinguistic phenomena, Abercrombie (1968, p. 68) rejected the 'initial unfortunate separation of the visible and the audible components', and integrated both visible and audible paralinguistic elements into his definition of paralinguistic phenomena or paralinguistic behaviour. However, he made a point of distinguishing elements that communicate and are conversational in nature from those that are not. Only those that are intentionally communicative would be described as paralinguistic. So, if I scratch my nose while speaking, it is not conversational in nature: it is not 'consciously controllable' (Abercrombie, 1968, p. 65). And although it may indicate that I am nervous, uncomfortable, or about to sneeze, such a movement is not (typically) produced ostensively and does not contribute towards communicating meaning.

It is important to note, however, that, according to relevance theorists (Wharton, 2016), nose scratching or any paralinguistic features that are generally deemed unintentional and uncontrollable may well be used to convey information covertly, to communicate that I am nervous or possibly telling a lie. It may be my intention to give my interlocutor the impression that it was not intentionally communicated. I may, on another occasion, intentionally use eye gaze to indicate to my interlocutor that I want them to notice something or someone. In that sense and according to Abercrombie's definition, gaze is paralinguistic. So, while paralinguistic behaviour is necessarily non-verbal, not all non-verbal features qualify as paralinguistic. Those paralinguistic behaviours are integrated by the interpreter into the final meaning communicated to them. More precisely, they are to 'converge to contribute to a final meaning or message of which they are an intrinsic part.' (Riley, 1979, p. 143).

I have defined paralinguistic phenomena using Abercrombie's definition (1968), but I have not yet demonstrated their importance in terms of how much those phenomena communicate. It is worth reminding ourselves of how little coverage non-verbal

communicative behaviours were given in the L2 listening literature while considering figures that show quite clearly why rethinking listening input in the light of the central role of paralanguage in face-to-face communication matters. Birdwhistell (1970, p. 158) states that ‘probably no more than 30 to 35 percent of the social meaning of a conversation or an interaction is carried by the words.’ According to Albert Mehrabian’s 7%-38%-55% rule (1972), however, 55 per cent of the information that we convey in a given exchange is communicated via our body language, 38 per cent via our tone of voice or how we say what we say and 7 per cent from what is said, so from the words themselves. While these figures have been disputed by many, indeed by Mehrabian himself on a radio broadcast (2014), they present a strong indicator of the significance of paralinguistic behaviours in communication and give us a taste of the ‘non-verbal dominance view of communication’. The importance of acknowledging the role of paralinguistic phenomena in face-to-face interaction is articulated by Abercrombie (1968, p. 65) who argues that ‘the conversational use of spoken language cannot be properly understood unless paralinguistic elements are taken into account.’ It is also expressed by Stevick (1982, p. 163) who claims that ‘nonverbal communication provides the surface on which the words are written and against which they must be interpreted’. Finally, Poyatos’ definition (1983, p. 129) reflects the top-down nature of interpretation once non-verbal cues are integrated into the picture:

What truly gives the spoken words their total meaning (which at any rate is not contained only in them) are a series of vocal/narial voice modifications and independent sounds and meaningful silences which today we subsume under *paralanguage*; and that, if visually perceived, those verbal expressions are accompanied by a great number of facial, manual and bodily gestures, gaze activities, manners, postures, postural shifts and stills, which constitute *kinesics*.

Although Poyatos’ definition of paralanguage is not consistent with the definition I adopt here: that of Abercrombie (1968), what Poyatos intends to reflect is the primary role of paralinguistic behaviour in top-down processing. What this means is that words are seldom fully meaningful unless the suprasegmental and other non-verbal elements of the message have given them their full meaning. Why do these phenomena matter

from a pragmatic competence point of view? And what are the consequences of this for L2 oral comprehension? As pointed out particularly by Poyatos (1983) and Stevick (1982) above, those elements help bridging the gap between words and their user, so that the interpreter understands them as a reflection of the user's intentions. This involves demonstrating an ability to carry out top-down processing: the on-line using of speaker (paralinguistic) communicative behaviour to interpret their words and understand their intentions, rather than reliance on the formal meaning of words to which is applied pre-existing knowledge to interpret speaker intentions. This is also aptly expressed by Wharton (2009, p. 141):

Many words encode quite general concepts, which must be fine-tuned by the hearer in inferring the occasion-specific sense intended by the speaker. Prosody is one of the many tools that can be used to guide the direction that this fine-tuning takes.

Wharton's claims about the relationship between prosody and pragmatics (2012) are in line with the body of work initiated and largely carried out by Romero-Trillo and referred to as 'prosodic pragmatics' (2016, 2019). According to Romero-Trillo (2012, 2016), prosody must be studied and taught in relation to the social actions it is used to perform, so as to facilitate intercultural communication. Much of the present work builds on the strengths of this body of work carried out on the pragmatics-prosody interface and its implications for L2 teaching. To be more precise, the present work expands it to reflect the central role of all paralinguistic behaviours in achieving pragmatic effects. As much as the study of meaning and teaching of L2 pragmatics would be incomplete without the analysis of acoustic elements of speech (Romero-Trillo, 2012), the study and teaching of pragmatics in relation to the acoustic elements of speech would be incomplete without attention to the visual elements co-occurring with the acoustic elements.

As reflected through my inclusive definition of paralinguistic behaviours, I believe that the pragmatic force of prosody does not come from prosody alone. I argue that it lies in the gestural dimension of prosody and in the way that prosody naturally interacts with other paralinguistic behaviours. Prosody in particular and paralinguistic features in general are the fine-tuning tools typically exploited when carrying out top-

down processing in inferential comprehension. Again, as reported by Padilla Cruz (2013a), those paralinguistic behaviours are not exploited by L2 learners generally, and this significantly hinders their pragmatic competence. They do not carry out top-down processing with ease either and they are often found to struggle to read their interlocutor's mind. Is it a coincidence? I contend that these characteristics are connected and that, as pointed out earlier in this chapter, L2 listening instruction has a responsibility to address those issues, yet, is not currently in a position to do so.

I support the view that the pragmatics of those paralinguistic elements is found especially in the way they interact with each other. To be more precise, I claim that the pragmatic nature of prosody comes through from the intimate connections it entertains with gesture (Bolinger, 1983b). That is the reason why I follow Abercrombie's definition in adopting paralinguistic phenomena as an umbrella term to include *all* aspects of overtly communicative behaviour (while conceding that covertly communicative behaviour can also be described as paralinguistic). I believe in the pedagogical significance of the co-occurring of sounds and movements. In fact, I believe that sounds and movements do more than co-occur. The observed working in tandem of vocal and gestural paralinguistic behaviours has been thoroughly investigated and aptly described by Bolinger. In *Where does intonation belong?* (1983a) and *Intonation and gesture* (1983b), not only does Bolinger demonstrate the co-occurring of intonation and gesture, he emphasises the overlapping and blending of sounds and movements in one complex of intonational and physical gestures. Bolinger (1983b, p. 157) makes a crucial point that we, in fact, 'read intonation the same way as we read gesture'. This bears crucial implications for our definition of listening input: there is no listening input as such. There is what we can term 'multimodal', or to use Kendon's word (2014a, p. 67) 'poly-modalic' inputs, and, consequently, input that invites the eyes to be as alert as the ears. These terms not only characterise the nature of the input, but they characterise also, as a result, the essence of utterances and of the activities and processes we engage in as interpreters of spoken language, speaker input and speaker meaning. There is a strong gestural dimension to prosody, as Abercrombie (1968) notes, and this is precisely where its pragmatic force belongs and what makes its pragmatic nature visible. This blurred line between the

physical and intonational input only makes the argument for an inclusive definition of paralinguistic phenomena even stronger. As Wharton (2016, p. 5) puts it:

The parallels are so strong that a single, homogeneous account of these para-/non-linguistic behaviours seems to be required, one that embraces the fact that they are, for the most part, closely interlinked.

Wharton's description is certainly in line with the biological argument for a multimodal view of language learning. McNeill (1985, p. 350) also described those concomitant paralinguistic elements as 'parts of a single psychological structure'. According to gesture researchers (Kendon, 1980, 2004, 2014ab; McNeill, 1992; Clark, 1996), vocal and visual modalities together form the act of communication, namely the utterance. It is recognised that, when we interpret language in motion, we take 'all communicative acts, including eye gaze, gestures, smiles and pointing, into consideration' and process them immediately (Hagoort and van Berkum, 2007, p. 808). This is known as the immediacy assumption, based on the observation that the mind follows the eye (Hagoort and van Berkum, 2007). This argument certainly resonates with Claudel's description of total and immediate receptivity. Thus, when we process utterances, we do not prioritise linguistic over paralinguistic input. So, why would L2 instruction adopt what Vigliocco et al. (2014) call a 'narrow-lens view of language' or a narrow-lens view of communication, focusing on the linguistic as a central or primary meaning and treating paralinguistic aspects as simple modifiers? We need to turn our attention to teaching the art of 'doing language' (Kendon, 2014b; Perniss, 2018) as a multimodal phenomenon and to focusing on developing L2 learners' pragmatic competence as interpreters.

1.6 Conclusion

This chapter has been devoted to building an argument for teaching the art of 'doing language' as a multimodal phenomenon and focusing on the development of L2 learners' pragmatic competence as interpreters. In order to do this, a model of utterance interpretation which accommodates a focus on the hearer's end of interaction, the use of paralinguistic behaviours and their role in achieving pragmatic

competence is required. In the next chapter, I outline a theory which does just that. I introduce relevance theory, and show it is the best candidate for inspiring a model of instruction focused on the development of L2 hearers' oral inferential abilities and reflective of multimodal on-line interpretation.

Chapter Two

Relevance theory and epistemic vigilance: understanding comprehension as a sub-module of the mind

The type of co-ordination aimed at in most verbal exchanges is best compared to the co-ordination between people taking a stroll together rather than to that between people marching in step.

(Sperber and Wilson, 1998, p. 199)

2.0 Introduction

This chapter introduces relevance theory as an inferential model of utterance interpretation which accommodates a focus on the hearer's end of interaction, the use of paralinguistic behaviours and their role in achieving pragmatic competence, showing why relevance theory is the best candidate for inspiring a model of instruction focused on the development of L2 hearers' oral inferential abilities and reflective of multimodal on-line interpretation.

2.1 Beyond the sentence given

The title of this first section refers to the title of Hagoort and van Berkum's (2007) article in which it is argued that utterance interpretation is shaped by factors beyond the sentence given. In that article, Hagoort and van Berkum demonstrate how verbal and non-verbal factors are used immediately and synchronously when a hearer processes speaker input, according to a one-step model of interpretation. Immediate access to factors beyond the sentence given allows a hearer to infer what a speaker means in uttering a sentence rather than what the sentence literally reads.

In their quest for an adequate theory of human verbal communication, linguists and philosophers have aimed to answer two questions: *what* is communicated and *how*

communication is achieved (Sperber and Wilson, 1986/1995, p. 1). This question has been addressed in various ways but, generally speaking, it has resulted in two models, both regarded as the potential basis for a theory of communication: these are the code model and the inferential model.

According to the code model hypothesis, communication is achieved when a signal encoded by a speaker is accurately decoded by a hearer. The original thought of the speaker is exactly duplicated in the mind of the hearer in the form of an identical thought. In contrast, to inferential model theorists, communication is achieved by producing and interpreting evidence of intentions (Sperber and Wilson, 1986/1995, p. 23). Although proponents of the inferential model recognise a level of coding/decoding, their central argument is that there is more to comprehension and communication than the mere coding and decoding of linguistic stimuli, and that the code model alone cannot account for what is communicated and how communication is achieved. The inferential model, shaping what is known today as inferential pragmatics, was introduced by Grice in his 1957 paper *Meaning*. Grice argued that if one model should be used to build the foundations of a theory of communication, it should be the inferential model. His inferential pragmatics was based upon his assumption that ‘communication is successful not when hearers recognise the linguistic meaning of the utterance, but when they infer the speaker’s ‘meaning’ from it’ (Sperber and Wilson, 1986/1995, p. 23). According to Grice’s model, hearers are far more interested in what the speaker means by a sentence and what she³ intends in uttering that sentence than in the sentence itself: ‘what words mean is a matter of what people mean by them’ (Grice, 1989, p. 340).

Uttering a sentence often leads a speaker to mean more, sometimes much more than is literally said. At times, a speaker means the very opposite of what the sentence itself says. This, surely, makes identity of thoughts an unattainable goal. This gap between saying and meaning is what Grice sees as a difference – sometimes radical – between what is said at sentence level, and what is ‘implicated’ at utterance level (Grice, 1967, 1975). Even though the speaker provides evidence of her intentions in the linguistic

³ Following the relevance-theoretic tradition, I refer to the speaker as ‘she’ and the hearer as ‘he’.

form she produces, the linguistically encoded element of an utterance seldom provides enough content for the hearer to fully recover what those intentions are. Thus, it follows from this that the intentions are to be inferred. The inferential model as proposed by Grice therefore describes communication as a ‘process of inferential recognition of the communicator’s intentions’ (Sperber and Wilson, 1986/1995, p. 9). The hearer’s inference can only be his best guess of what the speaker’s communicative intentions are. In this sense, speaker and hearer are said to entertain similar, rather than identical, thoughts.

The difference between decoding and inference can be further understood from looking at the distinction between linguistic prosody in Burmese and non-linguistic tones of voice in English. In Burmese, as in Mandarin Chinese and other South East Asian tonal languages (e.g. Thai, Vietnamese), tone is lexical; it bears lexical contrast. Modifying the tone on a word can entirely change its lexical meaning. Burmese has four different tones: low, high, creaky and stopped. For example, the word *ka* has four versions, which correspond to four different meanings, as (1-4) below illustrate:

- (1) /ka./ (creaky) to dance
- (2) /ka/ (low) to obstruct
- (3) /ka:/ (high) to exaggerate
- (4) /ka?/⁴ (stopped) to sidle up

Here, all four variants of *ka* belong to the same part of speech; they are all verbs, but there are cases where changing tone also changes the word class. Consider for example the Burmese word *nga*, its four different tones and corresponding meanings in (5-8):

- (5) /nga./ to be of sufficient quantity to go round (adjective)
- (6) /nga/ the informal version of the pronoun 'I' (pronoun)
- (7) /nga:/ fish (noun)
- (8) /nga?/ to gape (verb)

⁴ Diacritics (e.g. ‘.’, ‘:’, ‘?’) are used to mark a tone. For example, in /ka./ a dot is used to mark the creaky tone. Similarly in /ka:/ the colon indicates that the high tone is used, while in /ka?/ the question mark is an indicator of the stopped tone being used. A low tone, in /ka/, is indicated by an absence of a diacritic.

The tonal variants of *nga* therefore not only change its lexical meaning but also the part of speech it belongs to (i.e. adjective, pronoun, noun or verb). Thus, tones in Burmese are seen and described as purely linguistic and their meaning is said to be prosodically/linguistically coded. Similarly, in English, word stress can be lexical, as in (9) and (10):

(9) /con'struct/ and /'con.struct/

(10) /re'cord/ and /'re.cord/

In (9) and (10), word stress placement changes the part of speech the words 'construct' and 'record' belong to. As a result, the function and meaning of the word changes from verb (/con'struct/, /re'cord/) to noun (/ˈconstruct/, /ˈrecord/). In this sense, word stress in English has a similar function to that of tones in Burmese. However, lexical stress is not the primary function of stress and intonation in English. English is an intonation language rather than a tonal language. This means that in English, a sentence can be uttered in a certain tone, where tone does not refer to lexical tone but to intonation, attitudinal tone or affective *tones of voice* (Crystal, 1975). These tones of voice are generally non-linguistic in English and generally reflect attitude or emotions. Tones of voice in English are subsumed under what Abercrombie (1968) calls paralinguistic phenomena or behaviour and are used by the hearer to infer the speaker's communicative intentions. As seen in Chapter One, and as Chapter Three will further demonstrate, there is in fact a non-linguistic-linguistic continuum of cases of more or less 'natural'⁵ prosody. English tones of voice interact with pragmatics and are used in the hearer's inferential recognition of the speaker's intentions. Consider the English utterance in (11):

(11) [In a disappointed tone of voice and with a sad look on her face]: I got my results.

In (11), the hearer will infer (rather than decode) from the speaker's attitudinal tone what she means or the implications of what she says. If the addressee had no access to

⁵ The term 'natural' prosody (Wharton, 2003, 2012; Wilson and Wharton, 2006) will be introduced in Chapter Three to refer to 'non-linguistic' prosody.

the speaker's face and tone of voice, if they were communicating via a text message, he would probably respond: 'And??'. In (11), the tone of voice and accompanying facial expression fill the information gap. The hearer will be able to predict information that has not yet been revealed verbally. In uttering (11) with a disappointed sounding voice, the speaker may not only mean what she says, but she also communicates without saying: 'and they are not good', which can only be inferred from using the speaker's attitudinal voice and facial expression. It is understood as a way of preparing the hearer so that he expects the speaker to break bad news. The understanding of the linguistic form 'I got my results' is not sufficient for the hearer to infer that the speaker's intentions is to communicate her disappointment over her results. The hearer will not remember and report the speaker's utterance as 'she has got her exam results'. He is most likely to remember it as 'she has failed her exams' or 'her exam results are not what she expected'. This suggests that the conclusion that the hearer reaches is not (only) provided by what was decoded, but rather and more crucially by the hearer's inferential recognition of the speaker's communicative intentions. The code model alone thus cannot account for what is communicated by an utterance such as (11).

Sperber and Wilson not only argue that a theory of communication should integrate both coding and inferential processes, but also that pragmatic contributions occur at a very early stage in the interpretive process. They determine what is implicitly communicated rather than what is explicitly said. The post-Gricean literature has argued that reference fixing already presupposes pragmatic processes. For example, in (11), assigning reference to 'I', that is understanding that 'I' refers to the speaker, already involves pragmatic processing (Sperber and Wilson, 1986/1995; Recanati, 2004). Similarly, when the speaker says 'I got my results', the hearer has to pragmatically enrich 'results' and understand them as 'exam results' rather than 'blood test results' (i.e. free pragmatic enrichment). I turn to these early pragmatic processes in section 2.2.2.

Example (11) therefore illustrates how an inferential theory of communication better reflects how successful verbal (and non-verbal) communication is achieved. As Chapter Three further demonstrates, the interpretation of English prosody, and

contrastive stress particularly, relies heavily on pragmatics. As such, the hearer cannot guarantee that the inference he arrives at will correspond exactly to the speaker's intended meaning. When it comes to communicating attitudes and emotions in particular, reaching a close approximation of the speaker's meaning seems more plausible than achieving an exact duplication. For example, in (11), the speaker may be intending to communicate more than her disappointment over her results. She may be blaming the addressee, who suggested that they go out the night before her exam. She may also be pretending to have bad news, knowing that the hearer will expect it based on her tone of voice, when in fact her results are good, and she wanted to deceive him. The difference between tones in tonal languages and tones of voice in English bears crucial implications for the present research. As Chapter Three demonstrates, it has important implications for Mandarin Chinese L1 speakers learning L2 English.

2.2 The semantics – pragmatics interface: a relevance-theoretic perspective

2.2.1 The underdeterminacy thesis

Drawing on Gricean pragmatics, relevance theorists Sperber and Wilson (1986/1995) promote an inferential model as one that integrates a semantic level of 'sentence meaning' from which to move to the 'speaker meaning' level of interpretation by means of inference. That being said, although Sperber and Wilson draw on Grice's central claim for an inferential model of communication, they recognise the existence of an interface between semantics and pragmatics. They claim that both sentence and utterance levels of what is explicitly said and what is implicitly communicated suppose pragmatic contribution, on the grounds that sentences fall short of encoding full propositions. According to Carston (1998, p. 2): 'The decoded 'semantic' representation is seldom, if ever, fully propositional; it (...) requires pragmatic inference to develop it into the proposition the speaker intended to express.' As pointed out earlier in this chapter, pragmatic contributions occur at a very early stage in the interpretive process. This justifies a third level of full-fledged proposition. This third level of meaning has been coined differently by different Gricean-based theorists. The term 'explicature' was introduced by Sperber and Wilson drawing on Grice's use of 'implicature'. In *Logic and Conversation* (1975), Grice coined the term

‘implicature’ as referring to what is intentionally communicated or ‘implicated’ as opposed to what is said in the sense of sentence meaning. The relevance theorist notion of ‘explicature’ (Sperber and Wilson, 1986/1995; Carston, 2002) therefore refers to what is explicitly expressed once the hearer has assigned reference, disambiguated meaning and enriched the logical form of the sentence. The explicature corresponds to the full-fledged proposition the hearer arrives at before purely inferential processes are set in motion. What this third level of meaning entails is that the logical form of the sentence needs enrichment before it can be said to express a complete proposition. Any given sentence already presupposes pragmatic enrichment from its strict linguistic value to its propositional status. This view that ‘the linguistic semantics of the utterance, (...), underdetermines the proposition expressed’ is referred to as the semantic underdeterminacy thesis (Carston, 2002, pp. 19-20).

2.2.2 Inferred meaning

As this chapter has begun to sketch, there are often gaps between what a speaker says, the proposition expressed and what it communicates in terms of the speaker’s intentions. Inferential pragmatics seeks to understand how these gaps are filled, particularly how from the proposition expressed one infers what is communicated. Consider example (5) below. My mum – Brigitte – sits comfortably in front of the television holding an unopened chocolate cream yogurt. She then looks at my dad – Alain – (who has not yet sat down comfortably) and says:

(12) Oh sugar! I forgot to grab a spoon.

If you read (12) out of context, it does not imply anything more than the ‘conventional meaning of the words’ (Grice, 1975, p. 44). Once the sentence is uttered by a speaker, interpretations of the speaker’s meaning become available. Let us suppose that in uttering (12) Brigitte’s intention is for Alain to understand it as a request to go and grab a spoon for her before he sits down comfortably. Here, (12) does more than express the thought that Brigitte forgot a spoon. It is an indirect speech act (Austin, 1962; Searle, 1975). The utterance has the property of a statement but is to be interpreted as a request. What the utterance communicates is to be found in a

combination of both what the sentence linguistically encodes, what the proposition expresses and what the utterance implicates, i.e. the intentions behind the utterance. It can be said that utterance (12) is one realisation of the sentence ‘Oh sugar! I forgot to grab a spoon.’; it is the utterance produced by Brigitte on this occasion (Clark, 2013a). Two different speakers uttering the same sentence would produce two different realisations of that same sentence. That is, they would produce two different utterances.

There are aspects of the interpretation process that rely on Alain’s knowledge of the linguistic meaning of (12). For instance, Alain’s understanding of the linguistic meaning of ‘spoon’ will help him associate it with the eating of some sort of food. The meaning of ‘forget’ in its past tense form will help him understand that, as a result, ‘I’ does not have one now. Yet, the semantic level of (12) underdetermines its full proposition. Alain will have to enrich what the sentence alone says. ‘I’ refers to Brigitte. He will have to enrich a ‘spoon’ with which she can eat the chocolate yogurt, ‘forgot to grab’ from the kitchen, where she picked up the yogurt. Finally, ‘Oh sugar!’ will need disambiguating. Does ‘sugar’ refer to Alain, in which case Brigitte’s request may not be as subtle as initially thought? Or is it used as a euphemism for a common swear word? Free pragmatic enrichment, reference resolution and disambiguation all are pragmatic processes that will lead Alain to recover the full proposition expressed or Brigitte’s explicature from the logical form of her utterance. Yet, the full proposition is still not what Brigitte intends to communicate in uttering (12). The full proposition underdetermines the intended meaning. Inferential processes are set in motion to address the gap between the proposition expressed and the implicature or what is communicated. As the example shows, the implications of what Brigitte has said form an integral part of what she means by her utterance. Brigitte’s intended communicative act or the implicature of (12) is to request a spoon and, by looking at Alain, she overtly intends him to understand it as such – even more so if she calls him ‘sugar’. If she had uttered (12) without looking at him as if not intending to be heard, she could have been *covertly* intending Alain to go and grab a spoon for her (Sperber and Wilson, 1986/1995). The interpretation of speech acts thereby demonstrates how the addressee reaches the intended interpretation, that is the act performed beyond the uttering of the sentence.

Let us consider (12) again and introduce a little more context. Brigitte and Alain were discussing the TV programme and could not agree on what to watch. Brigitte wanted to watch *The Big Hospital Experiment* while Alain was tempted to watch *Callas: A Documentary*. They agreed that the first to be ready and sat down comfortably would get to choose. After picking up a chocolate yogurt from the kitchen, Brigitte comes to sit comfortably, looks at Alain and utters ‘I win!’. She almost immediately utters (12): ‘Oh sugar! I forgot to grab a spoon.’ On this occasion, in uttering (12), Brigitte does not intend to request a spoon. Or at least not immediately. She is not either calling Alain ‘sugar’. The most immediate implicature of ‘Oh sugar! I forgot to grab a spoon.’ is that Brigitte, although sat comfortably, is not ready. She needs to go and grab a spoon, and Alain, who is about to reach the sofa, is most likely to win. It looks as if they will be watching *Callas: A Documentary*. The two realisations of the sentence in (12) show that, ultimately, an utterance is to be understood in terms of speaker meaning and speaker’s intentions (Grice, 1969). The linguistic meaning of words should be characterised in terms of what the speaker means by them and in uttering them. This is best expressed in Sperber and Wilson’s words: ‘Hearers are interested in the meaning of the sentence uttered only insofar as it provides evidence about what the speaker means by it.’ (1986/1995, p. 23).

2.2.3 Intentionality

Grice’s intuition (1989) is that what words mean should be characterised in terms of what people mean by them and what their intentions are for using them. Grice (1957, p. 219) characterises meaning_{NN} in terms of a communicator’s intentions as follows:

“A meant something by x ” is roughly equivalent to “A uttered x with the intention of inducing a belief by means of the recognition of this intention.”

Grice’s analysis of meaning was then revised to reflect increasingly higher levels of intentionality, which seem to suggest, as Neale points out (1992, p. 549), that the primary purpose of communication seems to have shifted from the transfer of information about some state of affairs to ‘the transfer of information about one’s

mental states'. Grice's intention-based account of human communication which characterises his Theory of Meaning (1957) marks the point of departure for Sperber and Wilson's inferential model of communication. They started by acknowledging Grice's recognition of communicators' mindreading abilities as a reason for associating meaning with intentions. We, as communicators, are inclined to look for reasons behind people's behaviour and reading our interlocutor's mind involves what Sperber and Wilson describe as 'taking a stroll' with them (1998). Sperber and Wilson's primary motivation is to provide an explanatory and cognitively plausible account of how these intentions are effectively inferred. One question central to Sperber and Wilson's work is then to explain how, from all the competing hypotheses, we select the most plausible interpretation of a speaker's intentions. And, what constrains the selection of one hypothesis as being the most plausible interpretation of the speaker's meaning. Drawing on Grice's insights, Sperber and Wilson (2002, p. 249) make what they call 'an attempt to work out in detail one of Grice's central claims: that an essential feature of most human communication is the expression and recognition of intentions.' This is how they developed their own theory of communication and cognition with, at its core, the claim that comprehension is relevance-driven.

2.3 Relevance theory: communication and cognition

Relevance Theory can easily be thought of as the development of Grice's Cooperation Principle and his maxim of Relation. In his *William James Lectures* (1967), Grice presents his Theory of Conversation, according to which, participants in human verbal communication recognise a common purpose and a mutually accepted direction upon which expectations of cooperation are based. Grice's intuition is that human communication presupposes a Cooperative Principle, and maxims of Quality (truthfulness), Quantity (informativeness), Relation (relevance) and Manner (clarity) assumed to be shared and observed by communicators (Grice, 1989). Sperber and Wilson's theory does not however draw on Grice's work on cooperation (1981). It does not endorse Grice's Cooperative Principle, and, in fact, does not even presume that communication involves cooperation, for, they claim:

Even a self-interested, deceptive or incompetent communicator manifestly intends her audience to assume that her stimulus is relevant enough to be worth processing – why else would he pay attention?

(Sperber and Wilson, 2002, p. 256)

They claim that meeting expectations of relevance raised by an utterance is sufficient for successful communication (Sperber and Wilson, 2002, p. 250). Relevance Theory thereby focuses on one of the criteria identified in Grice's maxims: that of relation, or relevance. But, unlike Grice, Sperber and Wilson recognise the role of early pragmatic processes in assessing the relevance of an utterance to a hearer on a given occasion. As pointed out earlier in this chapter, they claim that the relevance of an utterance and its successful interpretation may also reside in the recovery of the logical implications raised by the linguistic form of a proposition. They argue that the more pragmatic implications a proposition has to the hearer's accessible assumptions, the more relevant it will be to that particular hearer on that particular occasion (Sperber and Wilson, 1981). Let us consider example (12) again. If Brigitte were to say to Alain that she forgot 'an eating implement consisting of a small shallow bowl with a relatively long handle', he, in inferring her intention, would be detracted from the act being performed and he would need to add an extra layer to the inference: she means a spoon. The full definition of 'spoon' does not offer extra effects and requires one more layer of inference, so more processing effort. Providing more, and unnecessary, information then leads to a less direct inference and a less relevant utterance. However, the linguistic level of an utterance can bear pragmatic implications as the use of the full definition could presumably have been used for a reason. It could lead to further pragmatic implications and therefore relevance. This example also shows how the maxim of quantity, as well as the maxim of relation – all four maxims in fact – can easily be subsumed in the principle of relevance.

At the core of Relevance Theory lies the Cognitive Principle of Relevance. According to this principle, the human cognitive system is predisposed to search for relevant information. Relevance, as a property of incoming inputs to cognitive processes, is defined in terms of positive cognitive effects and processing effort. Relevance is therefore a matter of degree. The more cognitive effects an utterance yields and the

less effort it takes to process it, the greater the relevance of this utterance to the addressee (Sperber and Wilson, 2002, p. 252), as illustrated in (13):

(13) Relevance of input to an individual

- a. Other things being equal, the greater the positive cognitive effects achieved by processing an input, the greater the relevance of the input to the individual at that time.
- b. Other things being equal, the greater the processing effort expended, the lower the relevance of the input to the individual at that time.

Sperber and Wilson's theory (1986/1995) is based upon the assumption that a submodule of the mind is dedicated to relevance-driven comprehension enabling us, humans, to engage in intention-based communication. The production of an utterance or other ostensive stimulus (e.g. a pointing gesture) is in itself an ostensive act of communication, and every ostensive stimulus is a presumption of its own relevance. Sperber and Wilson's theory goes along with Grice's idea that 'the very act of communicating creates expectations which it then exploits' (1967, p. 37). As such, an act of communication conveys to the hearer that paying attention to it will be worth their while. This is the basis for the Communicative Principle of Relevance (Sperber and Wilson, 1986/95, p. 260), defined in (14).

(14) Communicative Principle of Relevance: Every act of ostensive communication communicates a presumption of its own optimal relevance.

A speaker should make her communicative stimuli at least relevant enough to be worth processing, and, moreover, the most relevant one compatible with her own abilities and preferences. Every ostensive stimulus conveys a presumption of its own optimal relevance. Thus, according to Sperber and Wilson's definition of optimal relevance (2002, p. 256), an ostensive stimulus is optimally relevant to the addressee if:

(15) Presumption of optimal relevance

- a. The ostensive stimulus is relevant enough to be worth the audience's processing effort.
- b. The ostensive stimulus is the most relevant one compatible with the communicator's abilities and preferences.

Thus, according to the definition of optimal relevance, the addressee is entitled to expect the ostensive stimulus to be at least relevant enough, and, moreover, the most relevant one – that is it yields the greatest cognitive effects for the smallest processing effort – compatible with her own abilities and preferences. Therefore, optimal relevance is constrained by the speaker's abilities and preferences. The dedicated comprehension module takes as input an ostensive stimulus and delivers as output an interpretative hypothesis about the speaker's meaning (Sperber and Wilson, 2002). The Communicative Principle of Relevance and the presumption of optimal relevance set the foundations for a practical comprehension procedure for constructing a hypothesis about the speaker's meaning (Sperber and Wilson, 2002, p. 259):

(16) Relevance Theoretic Comprehension Procedure

- a. Follow a path of least effort in computing cognitive effects: Test interpretive hypotheses (disambiguations, reference resolutions, implicatures, etc.) in order of accessibility
- b. Stop when your expectations of relevance are satisfied.

The hypothesis that the hearer arrives at may well be false; 'but it is the best a rational hearer can do' (Sperber and Wilson, 2002, p. 13). Sperber and Wilson thereby acknowledge that inferences cannot be more than a best guess by the hearer of the speaker's intended meaning. In this sense, the inferential model posits an inherent element of risk, which I will come back to in section 2.5 when I introduce epistemic vigilance.

Based on her knowledge of a shared cognitive environment, the speaker is aware of the contextual assumptions that can potentially be made salient to the hearer. The degree of salience of these assumptions is a matter of how perceptible or inferable they

are to the hearer. And the more accessible the assumptions, the more likely they are to be selected and treated as relevant by the hearer. The role of the speaker then lies in making certain assumptions more salient in order to both prompt and guide the hearer's interpretation in the intended direction. To act on the salience or what Sperber and Wilson term *manifestness* of those assumptions, ostensive behaviour is described as making manifest to an audience an intention to make assumptions manifest (Sperber and Wilson, 1986/1995). These two layers of intention will be the focus of section 2.4 dedicated to ostensive-inferential communication.

2.4. Ostensive-inferential communication

2.4.1 Two-layers of information

As Neale (1992) points out, looking at the nature of the information shared in communication, shows that we not only share information, but we also communicate that we are sharing the information. In other words, we communicate about our communicative intents. Based on this observation, Sperber and Wilson (2008, p. 6) propose that there are two layers of information to be retrieved: the first layer corresponds to the information being pointed out, and the second layer to the information that the first layer is being pointed out intentionally. This extra layer of intention is key to understanding ostensive-inferential communication:

(17) Ostensive-inferential communication

- a. The informative intention: The intention to inform an audience of something.
- b. The communicative intention: The intention to inform the audience of one's informative intention.

Sperber and Wilson (1986/1995) claim that, in general, the second layer of information – the communicative intention – is a precondition to deriving the first layer and recovering relevant information, and that it is so because communication is mostly intentional:

Most human communication is carried out intentionally and overtly: The communicator performs an action by which she not only conveys some information but also conveys that she is doing so intentionally.

(Sperber et al., 2010, p. 360)

In recognising overt showing of an intention to inform, Sperber and Wilson (1986/1995, p. 54) develop Grice's intention-based account of human communication into an inferential model of human intentional communication, where 'inferential communication and ostension are one and the same process'. This is another central example of where and how Grice's work and Sperber and Wilson's diverge, which marks a crucial shift away from Gricean pragmatics.

2.4.2 Mutual manifestness: from intentionality to shared intentionality

The second layer of information, as seen by Sperber and Wilson (1986/1995, p. 31), is in line with Schiffer's idea that 'a true communicative intention is not just an intention to inform the audience of the communicator's informative intention, but an intention to make the informative intention *mutually known* to the communicator and the audience'. However, Relevance Theory integrates the notion of *mutual manifestness*, thereby replacing Schiffer's notion of mutual knowledge assumed not to be reflective of human psychology (Sperber and Wilson, 1986/1995). Sperber and Wilson (1986/1995, p. 63) describe mutual manifestness in these terms:

The communicator produces a stimulus which makes it mutually manifest to communicator and audience that the communicator intends, by means of this stimulus, to make manifest, or more manifest to the audience a set of assumptions.

The speaker not only claims the hearer's attention, but by doing so also draws attention to her intention to draw attention, thereby making that intention manifest to both speaker and hearer. It follows that an ostensive stimulus should fulfil two conditions: it should first attract the audience's attention, then focus it on the speaker's intentions (Sperber and Wilson, 1986, p. 153).

Consider example (12) again, while assuming that it was intended as an indirect request. Brigitte, by holding her unopened chocolate yogurt and looking at Alain, is drawing his attention both to it and her communicative intention. Not only is Brigitte drawing Alain's attention to the fact that she does not have a spoon, but she is also drawing his attention to her intention to draw his attention to it. Alain, by recognising her intention in looking ostensibly at him while holding her unopened chocolate yogurt, understands that she is requesting his help. By only uttering 'Oh sugar! I forgot to grab a spoon' without making eye contact, she would take the risk that he does not take the hint and, as a result, fail to recognise her intention. Alain may have assumed that Brigitte was talking to herself and would get up and go and grab a spoon herself. What is crucial here is that unless treated as ostensive stimuli beyond which there is evidence about the communicator's intentions, stimuli are most likely to be unnoticed and unattended to (Sperber and Wilson, 1986/1995). Therefore, missing the 'showing' would mean that Alain fails to recover the intention that goes with it. When both inferences, (1) Brigitte cannot eat her yogurt as she does not have a spoon and (2) Brigitte is requesting a spoon, are compared in terms of the processing effort they involve, it can be said that the inference that Brigitte cannot eat her yogurt is a more direct inference than the inference that Brigitte is requesting a spoon. *Mutual manifestness* in ostensive-inferential communication involves an extra layer of inference and therefore a less direct inference (Wharton, 2008). However, Brigitte's ostensive stimuli will trigger Alain to look for reasons for producing the stimuli. So, although it potentially takes him more time and effort to process, her ostensive stimuli come with the expectation that it has something extra to offer and that it is worth processing. In this way, ostension comes with a tacit guarantee of relevance, by both prompting the interpretation process and guiding the audience in interpreting the utterance in just the intended way (Sperber and Wilson, 1986/1995).

This balance between the speaker and the hearer is reflected in the term 'ostensive-inferential' communication, which makes visible both the role of the speaker and that of the hearer: ostension by the speaker and inference by the hearer (Clark, 2013a). The inference by the hearer is done and based on his recognition of the speaker's ostensive behaviour focusing him on her intentions. Sperber (2019) recently suggested that these two perspectives, that of the communicator who acts ostensively and of the audience

who interprets, would be better reflected and highlighted in the term ‘ostensive-interpretive’ communication. As this suggestion is under further development (Sperber, 2019), I will keep using the original terminology, while emphasising the importance of the balance between the two perspectives. The relationship between ostension and inference is encapsulated by Clark (2013a, p. 113), who states that ‘once the addressee has recognised that a particular act is an ostensive one, then the presumption of optimal relevance guides the addressee in interpreting that act’. It is also expressed by Wharton (2008, p. 12): ‘Someone who is ‘deliberately and openly’ letting someone know something creates the expectation in their audience that they have done so for a reason’, and this will trigger their search for positive interpretive effects.

2.4.3 The showing-meaning distinction

Grice wanted to draw a line between what he called ‘getting someone to think’ and ‘deliberately and openly letting someone know’ (Grice, 1957; Wharton, 2008), that is between $\text{meaning}_{\text{NN}}$ and showing respectively. Sperber and Wilson, by contrast, regard both $\text{meaning}_{\text{NN}}$ and showing as two instances of overt intentional communication or *ostensive-inferential* communication. A further limitation of the Gricean approach is that it does not recognise cases of spontaneously and overtly used ‘natural’ behaviours, even if they are openly shown to an audience and involve evidence and recognition of an intention, as a case of non-natural meaning (Grice 1989, p. 219). Yet, spontaneously producing, and openly not concealing a natural behaviour can contribute to the speaker’s meaning, and therefore a theory of communication should allow to integrate those cases of deliberate showing. This is what relevance theory does by placing $\text{meaning}_{\text{NN}}$ and showing at two extreme points of a continuum along which a variety of cases are allowed (Wharton, 2008; Sperber and Wilson, 2015).⁶

Searching for reasons behind people’s ostensive behaviour is not always a matter of finding reasons for having said what they have said, but can involve looking for

⁶ For a discussion of the integration of natural signs and signals along the continuum, see section 3.2.1.

reasons for acting *the way* they have acted and said what they have said *the way* they have said it. In allowing cases of overt intentional ‘showing’ which Grice had, deliberately, abstracted away from, and seeing a broader domain of overt intentional communication – what they call ostensive-inferential communication, Sperber and Wilson (1986/1995) make the analysis of paralinguistic communicative behaviours possible. Relevance theory is able to account for non-verbal ‘showing’, for ‘ways’ in the sense of speaker’s attitude and what the speaker sounds like. Allowing for cases of non-verbal showing also, as a result, entails cases of weak and vague communication (Wharton, 2008) which cannot be easily captured in propositional terms but where the hearer still understands what it shows in terms of the speaker’s intentions. Relevance-theoretic accounts of non-verbal showing were for example developed by Wilson and Wharton (2006) and Scott (2017ab, forthcoming) looking at prosody in relation to mind-reading mechanisms, and by Wharton (2009) applying relevance-oriented mechanisms to non-verbal communication more generally.

2.4.4 Ostensive behaviour and pointing

An example of ostensive non-verbal behaviour is the use of ostensive eye gaze or eye pointing. Suppose for example that a man sitting on a bench notices another, younger man looking like he is out for a walk and very lightly dressed. The younger man wearing shorts and apparently off to the beach suggests that he is most likely unaware of the dark clouded sky, and/or of what it shows evidence of. The older man is willing to make the evidence manifest to him by looking up at the sky so as to focus his attention on it in such a way that the younger man can expect relevant information from it. In the light of ostensive-inferential communication, the act of orienting the younger man’s attention towards the dark clouds also involves the recognition by the young man of the old man’s intention to make the clouds manifest to him, and therefore mutually manifest to the two of them. It follows then that the young man is expected to look for the reason behind the old man’s behaviour which will most likely lead him to infer that the black clouds are relevant to him, perhaps – for example – because the weather is changing. On a continuum between direct and indirect evidence, ostensive acts of ‘showing’, such as an ostensive look, provide relatively direct evidence of the basic layer of information (Sperber and Wilson, 1986/1995, p.

51). While the recognition of the intention behind the act adds processing effort in the recovery of the basic layer, it also makes the evidence stronger. As we saw above, ostension is a guarantee of relevance and a fair guarantee that it will prompt the addressee to work out its relevance to him.

The act of pointing, which is the focus of this thesis, can be regarded as an obvious case of deliberate ‘showing’ on the meaning_{NN}-showing continuum, thus justifying the need for broadening the scope of inferential pragmatics, in precisely the way relevance theory has been developing. By its deictic nature, pointing provides a good example of a goal oriented and intentionally produced non-verbal behaviour. As an ostensive communicative act, it is an apt illustration of a ‘pointer’ making an informative intention *mutually manifest* to the communicator and the audience. By drawing the hearer’s attention to her intention to draw his attention, the pointer exploits shared intention mechanisms and thereby create expectations that she has done so for a reason, making it an overtly communicative and powerful device to communicate one’s intentions. It not only draws the hearer’s attention, but also focuses his attention on her intentions; it points it in the direction of her intentions. As an ostensive behaviour, it therefore both prompts and guides the hearer’s inferential work.

2.5 Comprehension and epistemic vigilance

As expressed and demonstrated in this chapter, inferences cannot be more than a best guess by the hearer of the speaker’s intended meaning. In this sense, the inferential model posits an inherent element of risk. As part of addressing this risk, Mascaro and Sperber (2009) and Sperber et al. (2010) propose that along with the mental module dedicated to relevance-based comprehension, there is another genetically determined equipment dedicated specifically to being vigilant towards the interpretations that are made accessible to the hearer and towards the interpretation(s) reached by the hearer. This module is responsible for what they call ‘epistemic vigilance’. According to Sperber et al. (2010), comprehension and epistemic assessment are parallel processes triggered by the very same act of ostensive communication. While comprehension is underpinned by a relevance-guided comprehension procedure, epistemic assessment is carried out by a dedicated module which contributes to the capacity for ‘epistemic

vigilance'. This dedicated sub-module of the mind aims at 'filtering out misinformation from communicated contents.' (Mascaro and Sperber, 2009, p. 367). As we have seen in section 2.3, optimal relevance is constrained by the speaker's abilities and preferences. Epistemic vigilance, as an innate mechanism, is used by the hearer to assess the communicated information so as to assess the speaker's benevolence and competence. While a speaker may well be able to achieve relevance, they may not be willing to do so. Conversely, a speaker may be willing to achieve relevance but may lack the ability to successfully do so.

Their definition (Sperber et al., 2010) soon developed to include that hearers not only take a critical stance towards communicated information but also towards their own interpretive hypotheses (Padilla Cruz, 2016ab). They may end up rejecting their initial interpretation on the basis that there is a better alternative. It is important to note that these interpretive processes are simultaneous and immediate, not sequential (Padilla Cruz, 2013a, 2016ab). The definition of epistemic vigilance thus developed as a mechanism that prevents risks of misinterpretation and enables the hearer to 'assess the acceptability of an interpretive hypothesis' (Mazzarella, 2013, p. 43). This epistemic vigilance module, which determines whether an interpretive hypothesis about the speaker's meaning is acceptable as the output of the comprehension process, is what Padilla Cruz (2016b, p.25) labels *hermeneutical* vigilance or 'mechanisms protecting from misinterpretation'. Consider again what the hearer will typically do according to the relevance-theoretic comprehension procedure (Wilson and Sperber, 2002, p. 259):

(18) Relevance Theoretic Comprehension Procedure

- a. Follow a path of least effort in computing cognitive effects: Test interpretive hypotheses (disambiguations, reference resolutions, implicatures, etc.) in order of accessibility
- b. Stop when your expectations of relevance are satisfied.

Epistemic vigilance mechanisms involve testing those interpretive hypotheses and, while following a path of least effort, selecting the one that is most likely to be the one

intended by the speaker as the one relevant enough to the hearer. This is assuming that the hearer is competent in that he can access the various possible interpretations of the same utterance and adopt a cautious interpretation strategy by which he does not stop at the first ‘relevant-enough’ interpretation that comes to his mind (Sperber, 1994, p. 189):

The hearer should follow the path of least effort, but he should stop not at the first relevant enough interpretation that comes to mind, but at the first interpretation that the speaker might have thought would be relevant enough to him.

We will see in Chapter Four that the L2 user does not always have access to those alternatives requiring access to ostensive cues which trigger more sophisticated interpretive mechanisms. As Padilla Cruz (2013b, p. 40) notes, the risks that communication in an L1 involves ‘increase significantly when communicating in an L2.’ The second language user will typically end up using what Sperber (1994, pp. 187-189) calls a ‘naïve strategy’. By adopting this strategy, the L2 hearer will accept the first relevant interpretation that comes to his mind as the intended one. This has important implications for instruction focused on the development of epistemic vigilance and comprehension in the L2 hearer. Epistemic vigilance mechanisms are enacted ‘when hearers notice speakers’ linguistic mistakes, hearers realise that they have made interpretive mistakes or when hearers discover that speakers seek to mislead them to erroneous or unintended interpretations’ (Padilla Cruz, 2012, p. 365). But there again, in order to realise that he has made interpretive mistakes, the L2 hearer will need to have access to better alternatives. To enable L2 users to adopt a more cautious interpretive strategy, or ‘cautious optimism’ (Sperber, 1994; Padilla Cruz, 2012), I suggest that the relevance-theoretic domain of ostensive-inferential communication be exploited in L2 instruction providing increased access to paralinguistic behaviours and, as result, to better interpretation alternatives.

2.6 Beyond speaker's meaning⁷

As we have seen, going beyond the sentence uttered and attempting to capture what it is that the speaker means by it presents an intrinsic risk. From the speaker's point of view, there is a risk that there is a way which would have more economically communicated her intentions. As has been pointed out earlier in the chapter, from the hearer's perspective, there is a risk of not inferring the speaker's intended meaning. We have seen that our predisposition to be vigilant interpreters can be used and developed to address this risk.

At the same time, by allowing cases of overt intentional non-verbal 'showing' into their theory of communication and cognition, Sperber and Wilson also allow cases where meaning cannot be easily captured in propositional terms, or cases of 'ineffable' meaning (Longhitano, 2014). While the hearer will often still grasp what it shows in terms of the speaker's intentions, it may be difficult or impossible to pinpoint one proposition as constituting the speaker's meaning (Sperber and Wilson, 2015). On some occasions, the speaker might not commit to one particular interpretation and the hearer's inference is then described as going beyond the speaker's meaning (Sperber and Wilson, 2015). So called 'weak communication' often associated with non-verbal communicative behaviours might put the hearer at even more risk of misinterpreting the speaker's meaning. Wilson and Carston (2019, p. 34) remind us that:

Relevance theorists set out from the start to look for a set of pragmatic principles and mechanisms that can deal with the full range of overtly intentional communicative acts: verbal and non-verbal, showing and telling, determinate and indeterminate, literal and figurative, propositional and non-propositional.

In the context of developing L2 hearers' inferential abilities, triggered by ostensive paralinguistic stimuli, a theory of inferential comprehension which integrates paralinguistic behaviours for their role in communicating and interpreting intentions is essential. Relevance theory accommodates a focus on the hearer's end of interaction, the use of paralinguistic behaviours and their role in achieving pragmatic competence.

⁷ The title of this sub-section refers to Sperber and Wilson (2015).

While non-verbal aspects of communication have largely been overlooked in L2 instruction and L2 pragmatics studies generally, as pictured in Chapter One, they have not either been integrated into an L2 pragmatic development framework within relevance theory. The present work focuses specifically on improving L2 hearers' access to paralinguistic behaviours as a way of giving them access to enriched input and fostering more sophisticated interpretive mechanisms. Those paralinguistic behaviours contribute massively to enabling the hearer to go beyond the sentence given. The present work will seek to show that increased access to the speaker's ostensive paralinguistic behaviours contributes to developing L2 epistemic vigilance, which is part and parcel of pragmatic competence, and to addressing the pragmatic problems highlighted by Padilla Cruz (2013a).

2.7 Conclusion

In Chapter Two, I have suggested that relevance theory is the best candidate to act as a model of instruction focused on the development of L2 hearers' oral inferential abilities and reflective of multimodal on-line interpretation. In accommodating non-verbal communicative behaviours in a model of utterance interpretation, relevance theory acknowledges their central role as contextual cues that the hearer must use to move beyond language per se, and towards his inferential recognition of the speaker's intended meaning. Chapter Three introduces the type of ostensive paralinguistic behaviours which my thesis focuses on: *contrastive stress*. It shows its close equivalence to a pointing gesture and outlines my rationale for looking at contrastive stress in its multimodal context – what I call *prosodic pointing* – and for exposing Chinese L2 hearers to prosodic pointing.

Chapter Three

Relevance and prosody: from contrastive stress to prosodic pointing

3.0 Introduction

Chapter Three introduces the paralinguistic behaviour to which this thesis is largely devoted: *contrastive stress*. I account for the interpretation of contrastive stress in relevance-theoretic terms and present my rationale for exploring it as a multimodal phenomenon, which I call *prosodic pointing*. I demonstrate the pedagogical implications of exposure to prosodic pointing and highlight its relevance to Chinese hearers of L2 English.

3.1 Contrastive stress in English and other languages

3.1.1 Contrastive stress in English

English is known as an intonation, or pitch accent language (Wells, 2006). This means that there is a general tendency in English for the pitch accent called ‘nucleus’ to fall on the stressed syllable of the final content word of an intonation phrase, as in example (19). This is called unmarked tonicity. The nuclear syllable in (19) is indicated by the underlining.⁸

(19) I am making myself a cup of coffee.

If the final content word repeats information that is already given, the accent will then be shifted away from this location to highlight the last new piece of information. This

⁸ For now, I will mark the location of the nuclear accent by underlining the nuclear syllable as in example (19). Later in the thesis, I will indicate the type of nuclear tone by marking whether it is a fall (∨) or a fall rise (∨).

is referred to as marked tonicity. Often, this shift is used to communicate a contrast, as in example (20):

(20) Would you like one?

The phenomenon in which the nucleus falls on a constituent of an utterance that is not typically accented is called *contrastive stress*, a feature of prosody which English speakers make extensive use of to produce meaningful effects. Bolinger (1961) describes contrastive stress (or, as he calls it, *contrastive accent*) as the most conspicuous accent of all. It is produced by conveying ‘acoustic salience’ through ‘increased intensity and duration’ (Ladd, 1996, p. 58). As such, contrastive stress alters the salience of a particular constituent in an utterance and, as a result, the salience of one particular interpretation of that utterance. Consider how movement of the nuclear accent in examples (21b-26b) results in the speaker producing different realisations (Clark, 2013a) of one same sentence.

(21a) Is this the book that Emma had been looking for?

(21b) This is the book that I had been looking for!

(22a) Is this the dictionary that you had been looking for?

(22b) This is the book that I had been looking for!

(23a) This is not the book that you had been looking for, is it?

(23b) This is the book that I had been looking for!

(24a) Is that the book that you had been looking for?

(24b) This is the book that I had been looking for!

(25a) Is this the book that you had been looking at?

(25b) This is the book that I had been looking for!

Admittedly, in example (26b), the nucleus could fall on the last content word ‘looking’ to serve a contrastive function. However, if we wanted the nucleus to result in

contrastive reading in (26b), we would add some other unexpected element, such as a change in tempo or loudness, to draw attention to the word ‘looking’ as contrastive in some way.

(26a) Is this the book that you had been reading?

(26b) This is the book that I had been looking for!

In his definition of contrastive accent, Bolinger (1961) insists that contrast is not a property of the accent itself but rather a property of its function and of its meaning. It is contrastive in that it results in contrast. As House (2006) further explains, when an accented pronoun encourages the hearer to look for a referent that is different from the one she would have typically assigned to it, the accent does not in itself encode reference switching. It only guides the hearer in a particular direction and results in reference switching. Similarly, Scott (forthcoming) points out that stress itself does not bear contrastive meaning. It is the disconfirmation of the addressee’s expectations that draws his attention to the accented word, thereby prompting the search for different interpretive effects. In (21b), the unexpected prosodic placement of the accent encourages the addressee to look for extra cognitive effects associated with it being the speaker, and not Emma, who was looking for the book. In (23b), the unexpected prosodic pattern necessitates the correction of the hearer’s assumption that it is not the book that the speaker had been looking for.

Dohen et al. (2007, p. 221) note that contrastive stress (they call it *prosodic contrastive focus*) is used to ‘emphasize a word or group of words in an utterance as opposed to another’. Therefore, contrastive stress necessarily results in a contrast between the focused object and what has been deliberately left unaccented or deaccented. In (21b) the syllable ‘I’, rather than any other syllable, is accented. Its salience is raised, since ‘pitch accents render salient the material with which they are associated’ (Pierrehumbert and Hirschberg, 1990, p. 288). As a result, what is left unaccented is perceived as less salient (House, 2006). ‘I’ is also made more salient than any other possible referent, and so the speaker guides the hearer towards the inference that Emma had not been looking for the book.

While contrastive stress is used frequently in English, other languages may use it less systematically, sparingly, or not at all. Many languages, in fact, do not use pitch accent to mark focus. French, for instance, is not a pitch accent language, nor is it an intonation language. While French uses prosodic contrastive focus (Dohen et al., 2007), it is more typical that focus or contrast are marked by means of syntactic structures or morphological choices.

3.1.2 Cross-language differences and Ladd's study

As for the question of what motivates patterns of prominence and particularly the location of pitch accent across languages, there are two contrasting schools of thought. On the one hand, there is the structuralist view, according to which the placement of pitch accent is more or less determined by structural constraints and is not related to context or to speakers' intentions: accenting is therefore seen as predictable.⁹ And on the other, there are radical universalist theorists, who describe sentence accenting as a reflection of the intended focus of an utterance. They reject the idea of normal or default stress, and rule-based accent placement, on the basis that accent is only predictable if you are a mind-reader of speakers' intentions (Bolinger, 1972). In Ladd's words (1996, p. 167): 'What speakers decide to highlight is not a matter of grammar but a matter of what they are trying to say on a specific occasion in a specific context'. While both schools of thought regard intonation as meaningful, only the radical view sees intonational meaning as essentially a reflection of speakers' intentions and speakers' choices as to what features of an utterance should be made more salient (Ladd, 1996, p. 167).

As a famous defender of the radical universalist view, Bolinger (1983a) claims that the intonational highlighting function of sentence stress is natural, universal and possibly even pre-linguistic. In that sense, as seen in Chapter One, Bolinger (1983a) presents a view of intonation as biological and part of a broader 'gestural complex'. Ladd (1996) partially supports the radical view by proposing an alternative to the structural approach that gives a more central role to pragmatic factors in both the

⁹ At the origin of the structuralist view, the idea of 'normal stress' was developed by Chomsky as part of his nuclear stress rule (See Chomsky and Halle, 1968).

designation of focused constituents (broad focus) and in the distribution of accents within focused constituents (narrow focus). His approach also reinforces the idea that accent placement is never context-free. What prevents him from fully embracing the radical view, however, is that his cross-linguistic study of sentence accenting patterns seems to contradict aspects of the universalist argument. He explains that the picture is more complex and that consistent cross-language differences in patterns of accentuation present strong evidence against the idea of ‘some universal intonational highlighting function’ (Ladd, 1996, p. 167). Variability of accentuation is not consistent across languages, partly due to principles that constrain variability of accentuation in some languages. As structuralists put it, it is conditioned by the grammar of specific languages.

A more informed account of some cross-linguistic differences allows us to illustrate cross-language variation as far as pitch-marked prominence is concerned. The stressing of an element that is not typically accented or that is typically unmarked necessarily entails that an element which would have been expected to take the accent consequently becomes *deaccented*. Deaccenting is a pattern ordinarily used in English, for instance in cases of repeated or given information, as seen in example (20). Consider another example below:

(27) I bought a Ferrari, but she hates Italian cars.

In the second intonation phrase, ‘hates’ rather than ‘cars’ would be accented, for ‘hates’ is new information as opposed to ‘cars’, which is given information. Semantic weight is a condition for deaccenting in English. Thus, because ‘hates’ is considered semantically richer, ‘cars’ is deaccented. Romanian, Spanish and Italian, by contrast, resist deaccenting of repeated material. They would also typically resist deaccenting of last words as they are known as (+rightmost) languages (Ladd, 1996). Thus, in Italian, it would be acceptable, and in fact expected, to accent ‘cars’ again at the far end. This shows that, in Italian, structure prevails in the decision the speaker makes about accent placement. One counterexample in Italian is the deaccenting of the last word in negative sentences where the verb bears the focus. Consider example (28a) from Ladd (1996, p. 180):

(28a) Non è intelligente

(28b) *Not is intelligent

(28c) She/he/it is not intelligent

In (28a), the accenting of 'è' is conditioned by its (negative) environment. While deaccenting is possible under specific circumstances, it cannot be said to be systematically used nor produced without regard to structure as it is in English. The accenting of 'è' is not (only) based on the speaker's decision. Thus, it is relatively predictable. So, while contrastive stress and the resulting deaccenting is possible in Italian, its use is still constrained and ruled by the structural environment ('non').

A further case of cross-linguistic comparison is the deaccenting of semantically impoverished or empty content words. As illustrated above, the accenting of semantic peaks occurring earlier in the utterance (earlier than the phrase-final position) is possible in English. This means that the deaccenting of semantically poor content words found in last word position is also possible. In Italian, however, they are accented even if they are semantically empty. Semantic emptiness can come as a result of being repeated, given information, or as a result of being a general, unspecific, content word (e.g. people, things). Other principles may also condition pitch accent displacement. For example, consider (29) from Ladd (1996, p. 180):

(29) I heard someone

In (29), the indefinite pronoun 'someone' is typically deaccented as it is regarded as contributing little of semantic interest. In Italian, however, 'qualcuno' would remain accented because relative semantic weight is not a condition as such in Italian. These differences indicate that the accentuation patterns of a language can be a matter of the grammar specific to that language. It can also be a matter of the accent system specific to a language. In Norwegian, for instance, as Fretheim (2002, p. 1) explains, 'the speaker's intonational choices are severely restricted by the word-accent system'.

3.1.3 Implications of Ladd's cross-linguistic variation study

There is a general tendency for English to allow relatively free placement of the nucleus, as long as this placement is contributing to the speaker's intended meaning. Thus, English allows for more flexible nucleus placement in certain circumstances. These are determined according to pragmatic implications and the speaker's decision to accent salient parts and deaccent non-salient parts of an utterance more or less without regard to structure. Therefore, pragmatics prevails over strict structural considerations in English. While Ladd's main conclusion appears to be that syntactic conditioning may play a relatively important role across languages, another important conclusion is that it is only English data that seems to support the universalist view. In English, contrastive stress patterns rely on the speaker's intention to produce this or that effect. Ladd's study shows that English enjoys high pragmatically-motivated accentuation variability. It also suggests that English pitch accents exhibit more unpredictability and reference to the speaker's intentions in comparison with languages relying more heavily on syntactic constraints in their placement of accents.

However, according to relevance theorists, it does not follow from this that contrastive stress cannot be regarded as a 'natural' highlighting device in these languages. After all, this might simply indicate that contrastive stress may be more or less disruptive, more or less costly in terms of processing effort across languages, and may therefore be avoided. As Scott (2017a, p. 337) explains, 'while the individual means of creating an unexpected prosodic pattern may be language-specific, the overall process by which unexpected prosody leads to extra processing effort and thus extra effects is universal'. This lends support for the claims being made in the thesis in two crucial ways.

Firstly, contrastive stress is less accessible cross-linguistically and can potentially cause misunderstanding in English-medium intercultural communication. It therefore has important implications for English L2 acquisition and instruction, and it is an interesting case for intercultural pragmatics studies. While contrastive stress may not be used in other languages on the basis of its being too costly, speakers of English (whether as an L1 or L2) must be able to use and understand it. While explaining

patterns of prominence and particularly the location of pitch accent based solely on the English model would be misleading, as it is not systematically applicable cross-linguistically, I claim that awareness of the differences between the English model and languages that are not intonation languages can help create ways of making contrastive stress more accessible and likely to be processed in the intended way by speakers of other languages. Secondly, the claim by Scott above (2017a) also lends support to my rationale for exploiting the ostensive and multimodal nature of contrastive stress to prevent or overcome a possible misunderstanding. I claim that introducing contrastive stress in its paralinguistic context – as an alternative to contrastive stress alone – will facilitate the accessibility of English patterns of prominence in L2 learners of English. These claims will be further supported later in this chapter.

3.2 Relevance and the pragmatics of contrastive stress

3.2.1 The linguistic-natural continuum

In Chapter Two, I introduced the uncontroversial idea that not only what a speaker says but also the way she says it will contribute – sometimes crucially – to intelligibility. Exploring how prosody achieves meaningful effects via the relevance-theoretic comprehension procedure necessarily involves looking first into the nature of prosody. When it comes to characterising the nature of prosody, two views are found: the natural and the linguistic views (Wharton, 2003b, 2009; Scott, 2017b), as pointed out in Chapter One. These two views correspond closely to the universalist and structuralist view distinction presented in section 3.1. However, the discussion of these two schools of thought has led researchers to consider the nature of prosodic meaning more as a matter of degree rather than the all-or-nothing distinction reflected in either a natural or grammatical account.

House (2006) attempts to reconcile these two views by describing prosody and prosodic meaning as having a dual nature. She argues that intonation is indeed partly iconic and universal, but also that its interpretation comes from its interaction with the linguistic form. House therefore treats the interpretation of prosodic meaning as both a process of linguistic decoding and one of pragmatic inference. While Gussenhoven

(2002, 2004) characterises prosodic meaning in terms of either linguistic or ‘biological’ codes, Wharton (2003b, 2009) encompasses both natural and linguistically-coded aspects of prosody into what he terms ‘natural codes’ or ‘natural signals’ and argues for the existence of a continuum of cases between both extremes. The linguistic-natural continuum goes from what is prosodically-coded and part of a language-specific grammar, to what is described as an attribute of the speaker and can only be worked out via reference to the speaker’s intentions and by using mind-reading mechanisms. The distinction between linguistic and natural prosody takes us back to the difference between lexical stress and tones of voice, presented in Chapter Two. Thus, cases of more or less natural prosody, some of them depicted as natural signs or natural signals, are found on the natural-linguistic continuum (Wharton 2003b, 2009, 2012).

Grice (1957) draws an important distinction between natural and non-natural meaning. While natural meaning lies in the cause or relationship between states of affairs, non-natural meaning relies on the expression and attribution of intentions and the consequence is a conception rather than a state of affairs. Drawing on this, Wharton (2003b, 2009) makes an important distinction between natural signs and natural signals. Natural signs provide evidence of information and are not inherently communicative. By contrast, natural signals, by definition, carry a signalling function and are therefore communicative. To illustrate this distinction, Wharton (2009) compares the case of a shiver to that of a smile. While an authentic shiver is produced naturally, unintentionally, and does not perform a communicative function, smiling has developed into a socially recognised signalling device. The distinction can be further illustrated by using co-produced prosodic patterns. A shivering voice can be seen as a natural sign while a smile in the speaker’s tone of voice can signal approval, contentment, etc.

Although these two differ in terms of their communicative nature, this does not mean that signs are to be seen as unintentional and signals as intentional. They can both in fact be recruited for use in ostensive-intentional communication (Wharton, 2012). A shiver and accompanying shivering voice, for instance, can be overtly produced, unconcealed, exaggerated or even faked so as to indirectly request someone’s coat. It

can be made mutually manifest that it is produced for the hearer to question the speaker's intention behind the ostensive act (Wilson and Wharton, 2006; Wharton, 2012). In the same way, a smile and accompanying tone of voice can be produced both naturally and unintentionally if one is trying to keep a straight face but can hardly conceal that one is being entertained by a funny thought. Considering prosody as existing on a linguistic-natural continuum thus allows us to account for these nuances. It also allows for disparities as to how prosodic patterns are analysed within the relevance-theoretic framework.

3.2.2 From procedural encoding to procedures of comprehension

Imai (1998) describes prosody as a relevance indicator, some sort of natural 'pointer' indicating where relevance is to be found. A central idea that the literature seems to have embraced is that of prosody as an inferential constraint (Fretheim, 2002; House, 2006, 2007; Wilson and Wharton, 2006; Wharton, 2009; Tomlinson, 2013). Prosody constrains pragmatic inference by modifying the hearer's cognitive environment and constructing the context in which an utterance is to be interpreted. In the words of House (2006, p. 1550): 'the effect therefore is to constrain access to the context within which cognitive effects will be derived, narrowing the search space and reducing the processing cost'. While the relevance-based literature generally agrees on the procedural nature of intonational meaning, the nature of these procedures and what they involve is subject to more discussion.

For many, intonation encodes procedural meaning in the same way as a range of encoded linguistic and natural elements such as pronouns, determiners, punctuation, interjections, expressives and discourse connectives (Blakemore, 2000; Padilla Cruz, 2009; Scott, 2013, 2015; Wharton, 2003ab, 2009; Wilson 2011). It is commonly described as encoding instructions or procedural constraints prompting the addressee's search for cognitive effects and guiding inferential processing so as to minimise processing effort (Escandell-Vidal, 1998; Imai, 1998; Fretheim, 2002; Clark, 2012, 2013b; Wharton, 2003b, 2009). Whether prosodic information is seen as encoding linguistic or natural information (Wharton, 2003b, 2009), it can be described as a

procedural item (Wilson, 2011). This is further shown in House's words (2006, pp. 1549-1550):

In procedural terms, the accent is interpreted as an instruction to make selected material salient or 'in focus', thereby creating the focal structure of the utterance. Thus, an accent may encode an instruction or procedural constraint.

However, as Scott (forthcoming) notes, if stress encodes a procedure, then we would expect that procedure to be activated each and every time contrastive stress is used. Contrastive stress, as emphasised in section 3.1.2, is very much unpredictable and essentially a reflection of the speakers' decisions as to what part of the utterance should be made more salient. Scott (forthcoming, 2017b) moves away from encoded analyses of contrastive stress in rejecting the idea of contrastive stress as encoding a procedure. In fact, she argues that contrastive stress does not encode anything. It is procedural insofar as it guides the hearer's inference and its effects are interpreted and achieved purely inferentially. Scott's argument (forthcoming) is lent support by Sax's account of sentence stress (2011, p. 378), in which he pinpoints the distinction suggesting that aspects of sentence stress would be more accurately described as 'having an impact on the procedures of comprehension' rather than as 'encoding procedural meaning'. While both descriptions recognise the constraining nature and effect of prosodic patterns and contrastive stress in particular, they differ greatly in their way of accounting for how the constraint operates, whether by encoding and inference or by inference only.

3.2.3 Scott's account of contrastive stress

Sperber and Wilson (1986/1995, p. 212) follow Grice (1989) in treating contrastive stress as 'a purely natural device for pinpointing some noteworthy aspect of an utterance'. Wilson and Wharton (2006) regard it as a "'natural' highlighting device which achieves its effects via the automatic working of the relevance-theoretic comprehension procedure'. Wharton (2009) expands on this by suggesting that contrastive stress is a vocal form of pointing. Scott (forthcoming) argues that contrastive stress acts as a cue to ostension on top of the act of ostensive

communication, namely the utterance. It is as an extra cue to ostension that it triggers the addressee's search for additional interpretive effects. The unexpectedness of the marked nuclear accent draws the hearer's attention and puts him to extra effort. It is the disconfirmation of his expectations that triggers his search for extra cognitive effects (Scott, forthcoming). The ostensive cue is then used to guide inferential processing and reach optimal relevance. This implies that the hearer is put to more processing effort only insofar as this extra effort is expected to be offset by extra effects. Thus, contrastive stress does not lead to a 'quick and 'cheap'' inference (Tomlinson, 2013, p. 3569). It primarily *re-focuses* the hearer's attention, which causes it to be *effort-ful*. As House notes (2006, p. 1547), 'assigning salience orients the hearer to update her cognitive environment in a particular way'. This comes with extra processing effort. In the case of contrastive stress, the hearer is put to more effort only to raise his expectations of more or different cognitive effects (Scott, 2017ab, forthcoming). The updating of his cognitive environment or re-focusing of his attention necessarily involves extra processing effort on his part. It raises the addressee's expectations of extra or different effects on the account that the speaker must have good reasons for re-orienting him in a particular way. Consider one of relevance theory's central claims again, to understand the importance of those effects:

A communicator who wants some prosodic feature of her utterance to be understood as contributing to her meaning should therefore do her best to make it salient enough, and rich enough in effects, to be picked out by the relevance-theoretic comprehension procedure and help make the utterance relevant in the expected way.

(Wilson and Wharton, 2006, p. 442)

The salience found in contrastive stress is not encoded. It results from the disconfirmation of the hearer's expectations (Scott, forthcoming). As a result, contrastive stress is salient not because of the nuclear accent itself but due to the unexpectedness of the prosodic pattern. As an extra cue to ostension, it comes with the presumption that it is salient enough and rich enough in effects to be worth attending to and processing: 'Any departure from neutral (or 'expected') prosody would increase the hearer's phonological processing effort but would thereby encourage him to look

for extra (or different) effects’ (Wilson and Wharton, 2006, p. 448). More recently, Wilson and Carston (2019, p. 4) address this point further:

In language use, departures from expected syntax, wording or prosody (...) provide possible cues to ostension, focussing attention on particular aspects of the ostensive act and encouraging a search for additional interpretive effects.

Contrastive stress is therefore ostensive insofar as it attracts the addressee’s attention and focuses it on the speaker’s intentions. While contrastive stress is an unexpected prosodic pattern, it raises expectations of extra, or different, cognitive effects to offer. And while the production of an utterance by itself prompts a presumption of its optimal relevance, the production of contrastive stress expresses a presumption of its extra – or different – effects. What further reinforces this presumption and corresponding expectations is the act of ostension involved in the production of contrastive stress. In intentionally orienting the addressee in a particular direction, in disconfirming the hearer’s expectations of prosody, the speaker also shows her communicative intent (Scott, 2017b). The hearer’s acknowledgment of her communicative intent will further justify the effort put into searching for extra effects. It will also give him reasons to believe that the speaker believes she has good reasons to draw his attention in this particular way.

As a cue to ostension, contrastive stress thus both prompts and guides the search for extra cognitive effects (Scott 2017ab, forthcoming) purely inferentially. More importantly, as Scott notes, only the guiding function can be attributed to contrastive stress itself. The ‘prompting’ stage involves an extra layer of inference corresponding to the re-focusing of the hearer’s attention and the promise of it being worth processing. It also involves what Sperber and Wilson refer to as ‘mutual manifestness’ (Sperber and Wilson, 1986/1995, 2015). As we saw in Chapter Two, this layer of interpretation involves making manifest the intention to make something manifest to both speaker and hearer. In the case of contrastive stress, it involves making manifest the intention to draw the hearer’s attention to the salient constituent in her utterance (and implicitly the relegation of the non-salient parts to the background (House 2006)). Knowing how a hearer is likely to respond, the speaker can easily manipulate the effort

to which the hearer is put and manipulate his expectations so as to trigger his search for effects which justify that effort (Scott, 2017ab, forthcoming).

3.2.4 Contrastive stress and Second Language Acquisition (SLA)

Scott (2017a) follows the ‘natural’ definition of contrastive stress and reminds us that it is considered natural in spite of cross-linguistic variation, for it can be analysed in terms of processing effort and cognitive effects. We have seen that contrastive stress is more or less disruptive across languages. It will be less accessible to speakers of languages which do not place focal stress as freely as English does and make use of other, syntactic, constructions. French, for example, more typically uses cleft forms, as in example (30a):

(30a) C’est elle qui l’a fait’

(30b) *It is her who did it

(30c) \ She did it

The syntactic extraction illustrated in (30a) is preferred over stressing ‘elle’ to mark focus in French. This, again, does not mean that contrastive stress in French is not at all possible, but cleft constructions are generally preferred. French prosodic patterns do not allow for contrastive stress to be used as easily as it is used in English, and French has other preferred ways of conveying pointing (i.e. syntactic pointing). This is due to French being a non-intonation language.

To relevance theorists this suggests that processing contrastive stress would be costlier, and so used more sparingly, but it would also mean that processing it would be done with the expectation of it yielding greater or different effects. It is more or less established that paying attention to contrastive stress in English will be cognitively rewarding on the account that the speaker must have had good reasons for producing it. This is crucial for justifying the idea of exposing L2 hearers to contrastive stress in the L2 pragmatics acquisition context. L2 learners would have reasons to expect that extra interpretive effects will offset the extra effort put in processing unexpected prosodic patterns. We will see in Chapter Four that the unexpectedness of certain

paralinguistic behaviours can be used as a platform for salience, thereby drawing L2 learners' attention to otherwise unexpected and unnoticed patterns in their L1.

Scott's account of contrastive stress is further supported by Fretheim (2002) and Wilson (2016). When discussing intonation and inferential processing in Norwegian, Fretheim (2002, p. 59) describes how non-encoded patterns of intonation can guide a hearer's inferential processes:

Some linguistic devices have no conceptual meaning, nor do they encode a specific procedural instruction for the hearer to follow. Rather, they can be said to offer the hearer procedural information by virtue of their interaction with other kinds of linguistic devices in the utterance.

Similarly, Wilson (2016, p. 17) notes:

From the perspective of a theory of ostensive communication, where a public language is just one tool among many for getting the speaker's meaning across, we might reasonably expect languages to contain all sorts of devices which merely point the addressee in the right direction rather than providing a full concept as a starting point for inference.

There are various tools that can be used to guide interpretation, and those devices are used merely to point the addressee in the intended direction. These will affect the comprehension procedure whether they encode procedural meaning or not. While those accounts were not solely concerned with prosody, I suggest that the ideas put forward can feed into an account of contrastive stress. More often than not, these pointing devices will be interpretable only by virtue of their interaction, which further explains why contrastive stress on its own cannot always be said to encode this or that procedural instruction. It was suggested by Scott (forthcoming) that contrastive stress does not encode a procedure in that it does not activate procedural instruction each and every time contrastive stress is used. I suggest that this is largely due to contrastive stress being produced and interpreted together with co-pointing paralinguistic behaviours.

In face-to-face interaction, intonation in general (and contrastive stress in particular) is never produced nor interpreted in isolation but together with visual cues that play a crucial part in how intonational patterns are to be interpreted. Contrastive stress is typically used as one of many pointing devices and it is to be interpreted by virtue of its interaction with other linguistic and paralinguistic devices, all of which being integral parts of the ostensive act, i.e. the utterance. Following Scott's claim that contrastive stress does not encode anything, I intend to further defend her account through looking at contrastive stress in its multimodal context. The co-pointing gestures and paralinguistic devices employed together with contrastive stress are another reason why contrastive stress cannot be described as encoding procedural meaning. Its interpretation is purely inferential in that it results from its interaction with other pointing modalities. It does not activate procedural instruction for the hearer to follow due to the fact that its use depends greatly on the speaker's choices. This is a key argument underpinning my thesis, which I will further develop in this chapter and defend throughout the thesis. I will show that relying on encoded meaning does not systematically lead to the optimal interpretation, as an item might be interpreted differently based on the devices it interacts with. I will exemplify this point and demonstrate why contrastive stress and its co-existence with other pointing devices is particularly relevant to Chinese hearers of L2 English in sections 3.4 and 3.5. For now, in section 3.3, I propose that contrastive stress's visual and multimodal correlates call for an alternative term that stresses its underlying pointing function and pragmatic force: *prosodic pointing*.

3.3 Why pointing makes prosodic pointing 'special'

3.3.1 The relevance of pointing

While Ladd (1996) demonstrates that the idea of intonation universals falls short in some way, production of contrastive stress is often coupled with production of more universally recognised action. When Ladd concludes that sentence accentuation is not 'simply a matter of applying some universal highlighting gesture to individually informative words' (1996, p. 167), he is not far from claiming that a showing gesture

or gestural highlighting would likely be more universal and would thus be less controversially recognised as natural.

This suggests that – where English is concerned – contrastive stress might easily be seen as a vocal correlate of a pointing gesture. As Sperber and Wilson put it (1986/1995, p. 203), ‘stress is a sort of vocal equivalent of pointing [...] a natural means of drawing attention to one particular constituent in an utterance’. Indeed, the deictic nature of contrastive stress makes it a very close equivalent to a pointing gesture. However, as Scott notes (forthcoming), with contrastive stress, the ostensive act is the utterance itself or pointing gesture, while contrastive stress acts as an extra cue to ostension. The physical act of pointing – typically involving an extension of the arm and the finger towards the focused object – is an act of showing, presuming its own optimal relevance. This takes us back to what I started to sketch out in Chapter Two.

Recall the example of the old man eye pointing at the clouds. By intentionally orienting the younger man’s attention in a particular direction (i.e. the dark clouds), pointing both triggers and guides the young man’s search for relevance. By focusing the young man’s attention to what he might have otherwise ignored, the old man’s ostensive behaviour puts the young man to more effort, thereby encouraging him to update his cognitive environment. Pointing makes what is being pointed out salient, which comes with the presumption that it is rich enough in effects to be worth processing. By pointing at the dark clouds, the old man intends to get his addressee to look up and share his focus of attention, and then to focus his attention on his intention. If the addressee works out what the old man’s pointing ‘shows’ in the expected way, he will have communicated to him his belief that it is going to rain (Wharton, 2009, pp. 61-65). The young man is then free to believe it or not. The shared focus of attention is crucial here, as it corresponds to the relevance-theoretic idea of mutual manifestness. The old man not only attracts the addressee’s attention, but he also attracts his attention to his intention to draw his attention. Sharing a focus of attention involves the hearer’s recognition of the act as an ostensive request for attention. It also involves re-focusing the addressee’s attention on the speaker’s intention. As such, it follows that the addressee will expect extra effects to justify the extra effort. Sharing

a focus of attention is thus used to create expectations that paying attention to it will be cognitively rewarding. Recognising the imminence of rain might lead the younger man to change into more protective clothes in order to avoid getting wet.

The salience created in a pointing gesture, in singling out an object or feature and making it more visible as opposed to another, also ‘shows’ contrast. It thus narrows the search for relevance by making one feature more accessible for use in the inference and increasing the salience of some hypotheses while eliminating others (Wilson and Wharton, 2006). This shows that knowing that the hearer will likely assume that some relevance is to be found in a pointing gesture, the speaker can easily manipulate the hearer’s expectations and orient him in the intended direction.

There are clear parallels between contrastive stress and gestural pointing. Contrastive stress and pointing seem to share three properties associated with: (1) ostension, (2) expectations and (3) non-encoded meaning (Scott, 2017a).

- (1) Ostension: Contrastive stress acts as an extra cue to ostension, and gestural pointing is the ostensive act of communication. As such, they attract the addressee’s attention and focus it on the communicator’s intention, thereby involving a shared focus of attention and a layer of mutual manifestness.
- (2) Expectations: They raise expectations of (additional) interpretive effects to justify and offset the (extra) processing effort of the addressee.
- (3) Non-encoded meaning: They both trigger and guide the hearer’s search for (extra) effects without encoding any procedural constraints, which means that they are used and interpreted purely inferentially. They are means of showing something and in doing so guide the search for relevance (Scott, 2017a).

When used together, contrastive stress and pointing can be described as two parts of the same ostensive act. They offer more cues to ostension. Before considering the benefits of treating contrastive stress and pointing as driven by the same motivation,

the next section will give a more detailed account of what makes pointing ‘special’¹⁰ from a more biological perspective.

3.3.2 Pointing behaviours, joint attention, and Theory of Mind development

Bolinger’s description of a possibly pre-linguistic (almost biological) highlighting function of intonational contours used for the reading of speakers’ mental states and intentions (Ladd, 1996) has been, as we have seen, controversial. His description, however, seems to suit an arguably less controversial pre-linguistic (and certainly biological) universal of human communication: pointing. Prior to discussing why prosodic pointing may be worth exploring and exploiting, it is important to focus on the reasons why pointing is seen as a special behaviour. Pointing has been the focus of an important body of literature, interested in the central pre-linguistic role of pointing and its relationship with language development. Tomasello (2003, 2008) and Kita (2003) have contributed largely to the literature on pointing as a precursor to first words in infants. Loevenbruck, Dohen, and Vilain’s work (2008, 2009) focuses on the more biological aspect of pointing, which they describe as ‘ubiquitous and probably universal’ (2009, p. 212), and the cerebral domains that multimodal pointing recruits.

A pointing gesture is typically performed ‘with the index finger and arm extended in the direction of the interesting object and with the other fingers curled inside the hand’ (Butterworth, 2003, p. 9). Pointing is at the root of human communication (Kita, 2003). Pointing in children is first expressed with both the eyes and the finger. It is then communicated via intonation, and finally with syntax. Ocular and manual forms of pointing are not the only way of expressing pointing through gesture. Chin and associated eyebrow motion, for example, could be added to the list, depending on which part of the world you are in. Lip-pointing, on the other hand, is not exactly common nor socially recognised around Europe, but it is a widespread deictic gesture in Southeast Asia, the Americas, Africa and Oceania. A study of Lao speakers’ use of lip-pointing describes it as not only involving ‘protruding one or both lips, but also raising the head, sticking out the chin, lifting the eyebrows, among other things’

¹⁰ I refer to Loevenbruck, Dohen, and Vilain’s argument (2009) that pointing is a ‘special’ phenomenon in that the prosodic and gestural pointing modalities it involves recruit the same cerebral domain.

(Enfield, 2001, pp. 185-191). This seems in line with Loevenbruck, Dohen, and Vilain's (2009) claim that pointing is ubiquitous and universal. Pointing also holds a special status because it plays a special role in language acquisition and is related to lexicon development in infants (Baron-Cohen, 1995; Tomasello, 2003; Zufferey, 2014). But pointing is not only a precursor to first-word production and lexical development. Pointing is the ability to draw your listener's attention to an object or a direction (Loevenbruck, Dohen, and Vilain, 2009). It is used to orient his attention so as to share a focus of attention with him. Pointing is therefore a sign of developing intentionality mechanisms and Theory of Mind abilities, underpinning pragmatic development and social cognition (Premack, 1978; Mundy and Newell, 2007).

Joint attention, which is an aspect and indicator of Theory of Mind, is the ability to share one's and follow another speaker's attentional focus, or as described by Tomasello and Carpenter (2007, p. 121):

Joint attention is not just two people experiencing the same thing at the same time, but rather it is two people experiencing the same thing at the same time *and knowing together that they are doing this*.

In cognitive psychology, the ability known as Theory of Mind is the cognitive faculty to recognise and understand the intentions behind other people's communicative behaviour and to interpret that behaviour in terms of these intentions. These mind-reading abilities are developed from an early age, in particular through pointing (Tomasello, 1995, 1998, 2008; Tomasello, Carpenter, and Liszkowski, 2007). Joint attention competence is reflected in the extensive use of ostensive cues such as eye gaze and finger pointing in babies. Thus, pointing behaviours are developed (or spontaneously produced, it seems) to enable infants to share their focus of attention with another speaker and for their audience to recognise their focus of attention as being intentionally shared. So, shared attention also necessarily involves shared *intention*, which connects back to ostension and the idea that not only is the object of attention focused on, but the child's intention to focus their carer's attention on it is also made mutually manifest to both infant and carer. In the process of sharing attention, it is likely that the infant uses both finger pointing and deictic gaze or ocular

pointing (alternately from carer to object and from object to carer) so as to better connect with their interlocutor and ensure that their intention to focus their carer's attention on the object of focus is being recognised. In these joint attention interactions, the child is likely to be the initiator of the showing while the carer is likely to be the one following the child's focus of attention and recognising the showing as being intentionally produced. This seems to indicate that pointing-enhanced joint attention and Theory of Mind abilities are likely to be universal aspects of human communication (Zufferey, 2014, p. 73).

Even though social factors (i.e. socialisation provided by carers from higher or lower social background) as well as cultural factors may affect the pace of acquisition, pointing behaviours and shared attentional focus underlying Theory of Mind development (and the resulting relevance-based mechanism) were shown not to be language-specific (Zufferey, 2014).¹¹ Callaghan et al.'s study (2011) comparing Canadian, Peruvian and Indian children's use of pointing and shared attention concluded that variation was not cross-cultural but based on the socialisation provided by the child's carer. The study thus suggested that Theory of Mind mechanisms developed through pointing and joint attention competence were not culture-specific. The implications of these results are that English L2 learners are believed to use and respond to forms of pointing to share attention and intentions with their interlocutors.

One transitional point that sheds further light on children's use of pointing as being dependent on their audience's intentions, behaviours and knowledge is their tendency to point to novel objects (Loevenbruck, Dohen, and Vilain, 2008). Children seem to take the newness of information and knowledge of their audience into account in their decision to point. For example, a child would respond to an adult's searching behaviour by pointing to the object being searched for in the case where it was out of the audience's field of vision. The recognition by the child of their audience's intentions and knowledge at the time of the interaction is further confirmed by the absence of pointing reported when the audience has witnessed the object falling and knows where the object is. Newness and information status as conditions for gestural

¹¹ With the exception of a dialect of Quechua; for further details see Zufferey (2014, p. 73).

pointing, interestingly, present similarities with vocal pointing, i.e. contrastive stress, used to point to new rather than given information and to those things that the audience would have otherwise ignored. It seems reasonable to argue that there is a definite correlation between early forms of gestural pointing and vocal pointing, developed at a later stage. The fact that they both involve the stressing of an item based on its newness and informative-ness seems to indicate that pointing and contrastive stress correlate. This will work as a transition to my discussion of the analysis of contrastive stress and pointing as one audio-visual construct.

3.3.3 Prosodic pointing and multimodality

This section provides support from three disciplines in favour of considering prosodic pointing as part of a multimodal approach: relevance-theoretic pragmatics, the cognitive sciences and phonology. First, as we have seen, analysing contrastive stress and a pointing gesture in relation to the relevance-theoretic comprehension procedure seems to suggest that one single account integrating both contrastive stress and gestural pointing is plausible. Analysing both contrastive stress and gestural pointing together would also potentially shed light on how the two interact and the effect of one on the other. Contrastive stress seems to activate and coordinate with other more physical pointing modalities (e.g. bodily gestures and facial expressions), all of which participate in the ‘showing’ and in guiding the hearer in the inferential path. Any form of pointing has a salience-increasing effect and function. Thus, it can be hypothesised that multimodal pointing – prosodically-cued pointing accompanied by gesture – naturally increases the salience-increasing effect of each of its parts, thereby reinforcing the showing and reinforcing the presumption of extra or different effects. Thus, gestural pointing can be said to act as an amplifier of its prosodic component. As House (2007) points out, these associated pointing features work as a visual and biological confirmation which comes to testify to the prosodically-cued constraints. They come to confirm the orientation of the prosodically-cued pointing.

This seems to legitimise our considering prosody and gesture together under the same label. Reinforcing effects can potentially cut down the processing effort. However, if different pointing modalities correspond to and are to be understood as different parts

of the same message, again the inference is unlikely to be a quick and cheap one. There are cases of apparent mismatch between the audio and the visual parts of the message, where in fact these are different parts of the same message (Kendon, 1980). Uttering ‘She \ did’ with a nod and a frown could be an example of such a mismatch between the nod that parallels the stressing of ‘did’ and the frown that may be used to show disagreement or the speaker’s unhappy feelings. This apparent disagreement between the different parts of the message would put the hearer to greater effort. It would trigger his search for extra or different effects and invite him to pay attention to one modality to work out what another may show in terms of the speaker’s intentions. This may result in a less direct inference but one that potentially yields greater or different interpretive effects. This therefore confirms the need for a multimodal analysis of contrastive stress. The salience-reinforcing effect of the visual dimension of prosody is a strong motivation for envisaging the audible and visible as one, as two parts of the same process (Kendon, 1980), two parts of the same ostensive act.

The multimodal approach is also supported by the cognitive science-oriented literature. The notion of Theory of Mind has already shown how pragmatics and cognitive psychology can be brought together. It has been suggested that aspects of the Cognitive Principle of Relevance can be seen to have predated some of the claims of research in the cognitive sciences (Gigerenzer and Todd, 1999). What comes next should provide a good first illustration of how cognitive sciences can successfully add to and support a linguistically-based argument.

Loevenbruck, Dohen, and Vilain’s (2008, 2009) work has been focusing on pointing as a ‘special’ multimodal phenomenon in the brain. They investigated the possibility that some of the modalities would share features in terms of cerebral domains. While the activation of associative brain regions involved in the production of contrastive stress – what they call prosodic contrastive focus – has been shown and more or less established (Loevenbruck, Dohen, and Vilain, 2009), the idea of exploiting multimodality when perceiving and processing contrastive stress has not received as much attention. Loevenbruck, Dohen, and Vilain (2008) suggest that the detection and perception of contrastive stress relies on the reading of multimodal cues. Dohen et al. (2007) reported the results of Tong et al.’s (2005) study of the neural processes

involved in and underlying the perception of contrastive stress as opposed to that of intonation for question and affirmation discrimination. Their results indicated that processing contrastive stress involves more diffused neural activity. Dohen et al. (2007) compared French participants' perception of prosodic focus with that of syntactic pointing (used more typically in French). They found that the processing of syntactic pointing merely involved the frontal region of the brain, while processing of prosodic contrastive focus – what I call contrastive stress – recruited frontal and left parietal regions. The left parietal regions are typically associated with other forms of pointing. Perception of prosodic contrastive focus as well as its production therefore seems to recruit multimodal activity. This was further supported by Dohen and Loevenbruck's study (2009) on the interaction of audition and vision for the perception of prosodic contrastive focus. Their study (2009, p. 7) demonstrated that:

Even though the perception of prosodic focus is often considered as uniquely auditory, it is possible to perceive prosodic focus visually and the visual modality can enhance perception when prosodic auditory cues are degraded.

This emphasises even more the necessity to use multisensory information to detect contrastive stress and to consider the perception of contrastive stress as multimodal. It also suggests that English speakers would recruit associative brain regions in their production and perception of contrastive stress, on the basis that English typically uses contrastive stress over syntactic pointing. This has crucial implications for the acquisition and teaching of L2 prosody. It strongly suggests that a multimodal approach to teaching L2 prosody would facilitate its detection and subsequent acquisition by L2 learners. The associations described here are particularly important and relevant to the present study as they show the necessity of considering contrastive stress in relation to other (pointing) behaviours. This not only bears strong implications for an integrative view where prosody is treated as gesture; it also gives a strong motivation to exploit multimodality in L2 teaching, so that visual cues participate in facilitating perception of prosodically-cued pointing.

Finally, the phonological argument is supported by Ladd, who highlights the 'difficulty of unravelling intonation from its paralinguistic context' (Ladd, 1996, p.

40). He claims that intonation has to be considered and interpreted within and as an essential part of its paralinguistic context. In attempting to account for what intonation and other paralinguistic features communicate – either visible or audible – one will agree that they are difficult to paraphrase precisely in propositional terms (Ladd, 1996). Instead, their interpretation should primarily look at how they interact, how they each and all participate in the showing (Scott, 2017a). This reinforces the need described by the widespread *Linguist's Theory of Intonational Meaning* (Ladd, 1996) to show that context-dependent pragmatic inference plays a central role in their interpretation and that their meaning is interpreted purely inferentially for the involvement of multimodalities co-contributing to speaker's meaning (Bolinger, 1986, 1989; Kendon, 1972; Pierrehumbert and Hirschberg, 1990).

Bringing relevance-theoretic pragmatics, cognitive sciences and phonology together provides a strong rationale for using prosodic pointing and exploiting its multimodal nature in the L2 acquisition context. It has shown the necessity of considering prosody, and contrastive stress in particular, in its multimodal context. On this account, my argument for using prosodic pointing is as follows: Prosodic pointing is not just used as an alternative to the term 'contrastive stress'. It is used to reflect what the term 'contrastive stress' does not reflect, that is, its paralinguistic context. This work not only encompasses both prosodic and gestural aspects of contrastive stress, but it treats contrastive stress *as* gesture. It takes the gestural dimension of prosody into account and envisages prosody as part of a broader multimodal picture, to best reflect what contrastive stress involves. Why would considering prosody as gesture be beneficial or matter at all? Firstly, it can inform and enrich our L1 account of how prosody, together with other non-verbal communicative behaviours, achieves its effects from the activation of relevance-based mechanisms as illustrated above. Secondly and even more importantly, in the present study, it can inform L2 acquisition and instruction mechanisms. It is important to note here that I define prosodic pointing as multimodal pointing. Prosodic pointing may elsewhere be referring to prosodically-cued pointing. The present work, however, treats prosodically-cued pointing as one of the multimodalities involved in prosodic pointing. Prosodic pointing was first coined in Madella and Romero-Trillo (2019) as involving prosodically-cued pointing – or contrastive stress – and the accompanying head movements, facial modifications and

gestures which interact with it. I use the term ‘prosodic pointing’ and defines it as an expansion from contrastive stress: from contrastive stress to prosodic pointing.

3.4 Prosody as gesture: multi-modalities in interaction

Broadly speaking, two cases of interaction can be observed between the modalities involved in the production of prosodic pointing. Pointing modalities can work in parallel in which case the visible showing reinforces the audible showing and the paralinguistic features also ‘match’ the linguistic message. Consider example (31):

(31) She did it

In (31), the linguistic form ‘she’, the chin-, finger- and eye-pointing towards ‘she’ and the use of contrastive stress on ‘she’ coincide. This case is consistent with research that has shown that ‘nods, hand gestures, and eye contact coincide very precisely with events in the spoken message’ (Ladd, 1996, p. 34; Kendon, 1972). Bolinger (1983c, p. 98) describes these parallels as follows:

If intonation is part of a gestural complex whose primitive and still surviving function is—however elaborated and refined—the signalling of emotions and their degrees of intensity, then there should be many obvious ways in which visible and audible gesture are coupled to produce similar and reinforcing effects. This kind of working in parallel is easiest to demonstrate with exclamations. An *ah!* of surprise, with a high fall in pitch, is paralleled by a high fall on the part of the eyebrows... A similar coupling of pitch and head movement can be seen in the normal production of a conciliatory and acquiescent utterance such as “I will” with the accent at the lowest pitch—we call this a *bow* when it involves the head, but the intonation bows at the same time.

The ‘bow’ phenomenon described by Bolinger can be applied to that of a nodding gesture. A nod involves a head movement, but the intonation can often be seen to nod at the same time, as if to agree. The second case is one of mismatch between the linguistic message and the ‘attitude with which it is conveyed’ (Ladd, 1996, p. 34). I suggest that in such cases, attention to prosody can help the hearer bridge the gap

between the linguistic message and the attitude of the speaker. While both cases, match and mismatch cases, are of interest in the present study, the latter can be seen as having more implications for the development of pragmatic competence in L2 English. Why is that? In English, mismatches are possible between linguistic meaning: an auxiliary verb form marked positively (e.g. 'is'), a nodding gesture that apparently shows 'yes' and a frown which comes to confound the apparent positivity of the message. The paralinguistic input will be used to work out how the word is to be interpreted (Stevick, 1982). Paying attention to prosodic information can take the audience to understand that the speaker is disconfirming assumptions, correcting information and that behind the nodding face there is disapproval, disagreement or unhappy feelings to be found. Consider (32b):

(32a) He certainly isn't the best at throwing a party

(32b) He is the best (nodding)

In (32b), the accenting of 'is', the likely nod, possible frown or eyebrow rise and a face that indicates 'no' most likely show disagreement with what the first speaker (in 32a) has said. A nod is an interesting case as it is a good example of a gesture that has become like a word (Kendon, 1988). It has become a concept in many languages, meaning 'yes' or agreement. In (32b), the nod is used to agree with the positive aspect of the utterance to 'show' disagreement. The argument illustrated in (32b) is that prosody can help in differentiating a nod that means 'yes' from a nod that means 'no'. (32b) involves more intense and longer acoustic salience to trigger the hearer's search for extra effects. To reinforce the need to look for extra effects, the face gesticulating more intensely, the frown and a more intense look at the hearer will translate into a face that shows 'disagreement' with (32a). This will be understood as 'I am saying 'he is' and by saying it the way I say it I mean that I disagree with your mistaken assumption that he is not'. The same can apply to a head shake and a face which apparently does not 'say' no. These mismatches justify the need to train L2 hearers to use contextual cues to infer and move away from conceptual meaning. In cases where conceptual meaning fails, contextual paralinguistic cues can help capture the 'vividness of specific nuances in specific contexts' (Pierrehumbert and Hirschberg, 1990).

3.5 Procedures of comprehension and the case of L1 Mandarin Chinese hearers of L2 English

There are clear grounds for believing that exposure to prosodic pointing may be particularly relevant to Chinese hearers of L2 English as an aid to their learning. As has been suggested, the modalities involved in prosodic pointing, i.e. contrastive stress and accompanying visual cues, do not encode anything. They are described as an attribute of the speaker and can only be worked out via mind-reading mechanisms. Most crucially, those modalities are interpretable by virtue of their interaction, which, as we have seen, reinforces the idea that prosodic pointing does not encode anything. This means that their meaning alone will often need to be assessed on the basis of how they interact with other modalities. In English, ‘is’ does not systematically indicate a positive answer. Similarly, a nod does not always show agreement. It is by virtue of their interaction with co-occurring modalities (a frown and the accenting of ‘is’) that the hearer will likely infer the speaker’s disagreement. In that sense, those modalities set inferential constraints and guide procedures of comprehension by ‘making a certain inferential path more manifest’ (Fretheim, 2002, p. 59). Thus, prosodic pointing can be said to lie at the natural end of the linguistic-natural continuum.

By contrast, the conceptual nature of Mandarin tones, as illustrated in Chapter Two, makes them predictable and part of a language-specific grammar. Tones bear lexical contrast and, as such, are understood in the same way every time a speaker uses them, independently of what the speaker’s intentions are. This is critical in explaining why exposing L1 Mandarin learners of L2 English to prosodic pointing is pedagogically interesting and worth testing. It potentially indicates that L1 Mandarin hearers of L2 English have more to learn from exposure to non-encoded meaning, in other words meaning to be worked out via on-line pragmatic inference, than from exposure to encoded meaning. As emphasised in section 3.1.3, contrastive stress being less accessible cross-linguistically is an interesting case for intercultural pragmatics studies as it can potentially cause misunderstanding in English-medium intercultural communication. And while it may not be used as much in other languages, it needs to be used and understood by hearers of L2 English.

The difference between Mandarin tones and contrastive stress in English can be further explained in the light of MacNamara's distinction between what he describes as using language as a clue to meaning and using meaning as a clue to language (1972). In Mandarin, tones are part of the words, which encode meaning. In English, however, contrastive stress is a reflection of the speaker's choices and it is to be used to understand how what is said is to be interpreted. Contrastive stress and co-occurring modalities therefore illustrate how meaning can be used as a clue to language. MacNamara (1973) suggests that a great deal of that meaning may be conveyed through paralinguistics. To put it simply, he believes that paralinguistic cues can help the hearer to work out the meaning of words. This distinction bears important implications for pragmatic studies focused on L2 hearer's behaviour. I suggest that exposing Chinese hearers of L2 English to instances of prosodic pointing – precisely because it requires them to use meaning as a clue to language and paralinguistic cues to infer the speaker's intended meaning of words – can help tackle the pragmatic problems identified by Padilla Cruz (2013a) and enhance their pragmatic competence.

Another element lending support to this hypothesis is found in Chinese speakers' understanding of the yes/no concepts. Let us consider the nod and head shake again, this time from an intercultural perspective. The 'yes' and 'no' concepts, whether word- or gesture-based, are often seen as universal features, while they can in fact be a cause of intercultural miscommunication. Confusion may come from the dual meaning of the same gesture. In English, a nod can also show disagreement if it is used along with a positive statement which itself provides a negative answer. It is then only through detection and use of prosody and other paralinguistic features that the hearer can disambiguate between a 'yes' that means agreement and one that means disagreement. This dual meaning is particularly relevant to Chinese learners of English, as in Mandarin Chinese 'yes' or a nod always means agreement and 'no' or a head shake disagreement. By way of illustration, let us imagine this exchange between an L1 speaker of English (33a) and a Chinese learner of L2 English (33b):

(33a) David isn't in today, then?

(33b) Yes. (nodding)

The L1 speaker is likely to infer disagreement: ‘Yes, he \ is in’, while the L2 speaker means agreement: ‘Yes (you are right), he isn’t’. To answer positively to the question asked, the L2 speaker is expected to say: ‘He isn’t, no’, possibly with a head shake.

In Mandarin, ‘yes’ and a nod agrees with what our interlocutor thinks: ‘Yes’ in Chinese means ‘You are right; that is true’, while, in English, it refers to the action being described (Halliday, 1967). The illustrated confusion between Chinese and English L1 speakers can have serious implications for L2 speakers’ and hearers’ performance and lead to pragmatic failure in intercultural communication. I propose that it is through learned attention to the paralinguistic features involved in prosodic pointing that Chinese hearers of L2 English¹² can disambiguate between a ‘yes’ that agrees and one that disagrees. Exposure to multimodal cues – as opposed to prosodic cues only – can achieve the following:

- (1) Focus the attention of Chinese L2 hearers on the speaker’s intentions,
- (2) Help Chinese L2 hearers to develop more sophisticated, top-down interpretive abilities as part of developing L2 epistemic vigilance, and, in particular,
- (3) Help Chinese L2 hearers to discriminate a ‘yes’ answer that means ‘yes’ from a ‘yes’ answer that means ‘no’.

Finally, learning to pay attention to all paralinguistic cues is believed to help Chinese L2 hearers challenge linguistic meaning and move closer to the speaker’s meaning, thereby addressing the pragmatic problems identified (Padilla Cruz, 2013a).

3.6 Conclusion

This chapter introduced the type of ostensive paralinguistic behaviour that is the focus of this thesis: contrastive stress. I have accounted for the comprehension of contrastive stress in relevance-theoretic terms and argued that it is interpreted by virtue of its interaction with co-speech pointing gestures, such as head movements and facial

¹² From here on, I will be referring to Mandarin Chinese L1 speakers learning L2 English as ‘Chinese L2 hearers’, ‘Chinese L2 interpreters’ or ‘Chinese L2 learners’.

expressions. Adopting a multimodal perspective, I have outlined a rationale for looking at contrastive stress in its multimodal context – what I call *prosodic pointing* – and developed my argument for exposing Chinese L2 hearers to prosodic pointing. The next chapter demonstrates how my relevance-theoretic model of instruction applies Ifantidou’s pragmatic competence development framework (2014) to oral inferential comprehension based on access to and interpretation of ostensive paralinguistic behaviours.

Chapter Four

Enhancing pragmatic competence in L2 hearers: a relevance-theoretic model of instruction

4.0 Introduction

Chapter Four shows how relevance theory can inform a model of instruction that aims at enhancing ostensive-inferential competence in Chinese L2 hearers by applying Ifantidou's pragmatic competence development framework (2014) to oral inferential comprehension based on access to and interpretation of prosodic pointing. I call this relevance-theoretic assessment and instruction model the Noticing-as-Ostensive (NaO) model. This chapter also articulates in more detail my hypothesis that prosodic pointing, as a form of ostensive multimodal input, will play an important role in setting the stage for Chinese L2 hearers' recognition of relevance, and in so doing, enhance their pragmatic competence.

4.1 Defining pragmatic competence

4.1.1 A cognitive-pragmatic approach to defining pragmatic competence

Early research into developmental pragmatics was focused primarily on the connections between language and social interaction, and treated pragmatics as related to social skills, i.e. the ability to use and modulate language and be socially adequate. The term 'pragmatic socialization' was coined by Blum-Kulka (1997, p. 3) to describe 'the ways in which children are socialized to use language in context in socially and culturally appropriate ways'. Thus, until the turn of the 21st century, studies in pragmatic development were largely limited to its social dimension, and pragmatic competence was exclusively associated with social competence, in the sense of the interpersonal and the cross-cultural domains. Thompson (1997, p. 4) states that 'being communicatively competent requires combining social competence with linguistic competence'. The social competence that he describes involves 'knowing how to

behave in specific social contexts' (*ibid.*). Similarly, Clark (2003, p. 246) provides a list of competences corresponding to the actions children learn to perform with language, such as to 'mark social roles for speaker and addressee, to be polite, to be persuasive, to talk inside the classroom as well as outside, and to tell stories'.

This sociocultural approach to pragmatics refers to the ability to modulate language use based on the nature of interpersonal relations between speaker and hearer and/or on the cultural differences between them. Thus, being pragmatically competent has long been depicted and understood as being able to use socially adequate language and/or as being aware of and adjusting to cross-pragmatic variations. The literature has largely abstracted away from the cognitive aspects of pragmatic competence (Zufferey, 2014). While over the past decade or so the focus on the social dimension of pragmatics has gradually shifted towards the integration of the cognitive domain (Kecskes, 2010, 2014), many researchers still emphasise the role of social factors over cognitive ones. For example, Ariel (2010) argues that a crucial sociocultural foundation is necessary before one can rely on pragmatic interpretative processes. By focusing on the sociocultural aspect of pragmatics, developmental pragmatic studies have largely been centred around the speaker's end at the expense of the hearer's end of interaction. Similarly, as pointed out by Padilla Cruz (2013ab), L2 pragmatics studies seem to have long been concerned with L2 speaker's behaviour over L2 hearer's behaviour. Rather than considering communication as a balance between the respective roles of speaker and hearer, L2 pragmatics studies have long regarded it as a production-only phenomenon.

To teach pragmatics is to teach communication. Yet, communication is never just about the production end of interaction (Ifantidou, 2014; Padilla Cruz, 2013b). Ifantidou (2013ab, 2014, 2016) has been focusing on L2 comprehension within the relevance-theoretic framework and particularly on L2 inferential comprehension of written forms of verbal communication. When pointing out that L2 hearer behaviour has received little attention in comparison with L2 speaker behaviour, Padilla Cruz (2013ab) argues that L2 hearers have as much of a role to play in avoiding pragmatic failure. The focus that I adopt here is also on the hearer's end of oral communication. More specifically, I am concerned with the hearer's behaviour as one that depends

greatly on the ostensive behaviour of the speaker. Thus, I do not argue for a focus on the hearer at the expense of the speaker, but instead argue that developing pragmatic competence as a hearer requires a focus on the interaction between hearer and speaker. In following Sperber and Wilson's cognitive-pragmatic approach (1986/1995), I focus primarily on the mental processes underpinning comprehension and cognitive-pragmatic development, that is, on the part that does the interpretive work, while recognising the existence of an interface between the cognitive and social domains. As social cognition suggests, early developed cognitive mechanisms such as shared attention mechanisms imply a social partner and someone to share one's focus of attention with as a means of guiding them to interpret goal-related behaviour. I endorse the view that the cognitive processes involved in communication lead to social interaction too, as illustrated by the development of social cognition. This is reflected in Sperber and Wilson's remarks on relevance theory and the social sciences (1997, p. 2):

Inferential communication is intrinsically social, not just because it is a form of interaction, but also, less trivially, because it exploits and enlarges the scope of basic forms of social cognition. Right or wrong, this is a strong sociological claim.

In their response to criticism over an alleged anti-sociological claim in relevance theory, Sperber and Wilson further explain that while their aims appear to be resolutely cognitive, they have always seen their work as contributing to both cognitive and social domains (Sperber and Wilson, 1997, p. 1). Cognitive psychology has largely shown that we, even as individual egocentric minds¹³ (Kecskes, 2014), have been attributing mental states to others and demonstrated an interest in understanding ostensive behaviours from an early age. This is because other minds are intrinsically relevant to us. And it is worth asking the question whether this biological predisposition to engage in shared attention mechanisms might be exploited during the acquisition of new attentional biases in an L2. The idea put forward in the present thesis is therefore to create for the speaker and hearer a meeting point, reached through shared attention, before the hearer can set inferential processes in motion. I

¹³ Kecskes's criticism of relevance theory is based on the idea that because we, communicators, operate as egocentric minds rather than cooperative ones, we activate the most salient information to our attention and, as a result, we may well select an egocentric interpretation over the intended one.

hypothesise that this meeting point can be facilitated via exposure to prosodic pointing.¹⁴

4.1.2 Pointing and the cognitive approach to pragmatic competence development

An act of pointing is an apt illustration of those social cognition mechanisms underlying comprehension as defined by Sperber and Wilson (1986/1995, 1997). While vocal and/or gestural pointing, as acts of showing, draw attention to the ostensive act being produced, prompt and guide the hearer as to where to find optimal relevance, they also establish a connection between hearer and speaker. Thus, I argue that an act of pointing should not be seen as just ‘the index finger and arm extended in the direction of the interesting object and with the other fingers curled inside the hand’ (Butterworth, 2003, p. 9). It should also – and more crucially – be read as the speaker’s index finger and arm extended, reaching for the hearer’s, with their outstretched hands almost touching in a way similar to Michelangelo’s Creation of Adam on the ceiling of the Sistine Chapel. Pointing is about making a connection; it is about the speaker reaching for the hearer’s attention. In this sense, it seems that vocal and gestural pointing, i.e. prosodic pointing, needs exploiting in association with a relevance-based model of L2 comprehension instruction in order to trigger in L2 hearers the social-cognitive mechanisms that are precursors to L2 inferential comprehension development. While contrastive stress is language-specific, it is well established that pointing, in all its varieties, is a universal phenomenon that is often a determiner of developing shared intentionality mechanisms underpinning social cognition and the resulting pragmatic development (Premack, 1978). As such, I believe that pointing can reach L2 hearers generally, and Chinese L2 hearers specifically.

¹⁴ The full hypothesis will be formulated in section 4.4.4.

4.1.3 The L2 speaker as hearer, the L2 hearer as speaker

Cognitive psychologist Cooper Cutting (2009, p. 193) points out that ‘luckily, each one of us is both a speaker and a listener’. As reflected in relevance theory’s communicative principle, the speaker can manipulate the hearer’s expectations based on being a hearer herself:

Knowing your tendency to pick out the most relevant inputs and process them so as to maximise their relevance, I may be able to produce a stimulus which is likely to attract your attention, activate an appropriate set of contextual assumptions and point you toward an intended conclusion.

(Sperber and Wilson, 2004, p. 9)

Cognitive psychologists have shown that the speaker’s adjustment to her way of highlighting portions of an utterance by use of intonation strongly indicates that a speaker generally work on making comprehension easier for the hearer (Cooper Cutting, 2009; McBride and Cooper Cutting, 2018). Again, this shows the potential of prosodic pointing as an apt example of how the speaker can guide the hearer in his recovery of the optimally relevant interpretation. As I have pointed out earlier, the present study focuses on the cognitive aspect of pragmatic competence, and on comprehension and the receiver’s end of interaction. Yet, comprehension is not treated in isolation or as opposed to production, but in relation to production. This is key to explaining why I draw on relevance theory and believe in relevance theory’s potential as a theory of L2 oral comprehension instruction. It is precisely because – while focusing on the part that does the interpretive work – relevance theory also recognises the important role of the speaker in allowing the interpretive work to be carried out by the hearer. As pointed out in Chapter One, L2 oral comprehension needs to be understood and learned in relation to the speaker if the hearer is to infer the speaker’s intended meaning.

4.1.4 A relevance-based definition of pragmatic competence: the hearer's perspective

In the present thesis, comprehension is understood as *inferential* comprehension and, as such, pragmatic competence is understood as pragmatic competence that we develop as hearers or interpreters. I define pragmatic competence in cognitive, relevance-theoretic terms as ostensive-inferential competence, that is, as the hearer's ability to attend to the speaker's ostensive behaviour and use it to infer the speaker's intended interpretation. My focus on enhancing pragmatic competence as *ostensive-inferential* competence implies that, as hearers, L2 learners learn about the roles of both hearer and speaker in relation to each other: the speaker's ostensive behaviour and the hearer's inferential work. The reason why I define L2 hearer's pragmatic competence as ostensive-inferential competence lies in the idea that hearer's behaviour is learned in relation to that of the speaker. Ostensive-inferential competence therefore encompasses both attentional and inferential abilities. As a hearer, you pay attention to the speaker's ostensive behaviour or evidence of the speaker's communicative intentions to infer what those intentions are.

4.2 Assessing L2 pragmatic competence

4.2.1 Assessing L2 pragmatic competence and the inclusion of non-verbal communicative behaviours

Prior to assessing pragmatic competence, it is important to define and demark what typical pragmatic behaviour of hearer/interpreter involves and, at the same time, what exactly characterises pragmatically atypical behaviour in L2 interpreters. In Chapter One, I identified four features characteristic of the L2 learner's pragmatic problems (Padilla Cruz, 2013a, p. 121), which, I suggest, are interrelated:

- | |
|--|
| <ul style="list-style-type: none">A. Overreliance on linguistic inputB. Lack of attention paid to the speaker's paralinguistic contextual cuesC. Difficulty carrying out top-down processingD. Difficulties reading their interlocutor's mind |
|--|

A, B, C and D are believed to be linked in that L2 learners' overreliance on linguistic input and lack of attention to paralinguistic contextual cues likely explain their preference for bottom-up processing and potentially cause them to misread their interlocutor's mind. Those are all seen as major barriers to the L2 interpreters' pragmatic behaviour development. Instruction aiming at enhancing L2 interpreters' pragmatic competence should therefore focus on helping with these four issues. I believe that it is precisely the increased attention to non-verbal means of communication – to their ostensive nature and communicative value – that will help to address the outlined problems through L2 hearers' development of more sophisticated interpretive abilities.

The need to pin down what is characterised as pragmatically typical of L1 hearer behaviour to help in determining and addressing what is pragmatically atypical in L2 hearers comes from a clinical perspective (Cummings, 2009; Perkins, 2007). Although clinicians dealing with patients with pragmatic impairments and L2 instructors have different motivations for assessing pragmatic competence, both justify the need for demarcated boundaries when defining pragmatic behaviour. This, however, does not mean that the criteria for delimitation should be the same. In delimiting her criteria for assessing pragmatic competence in patients with pragmatic impairments, Cummings (2009, p. 219) excludes non-verbal behaviours. She justifies this decision by stating that:

It is only a very loose conception of the field of pragmatics, specifically one that identifies pragmatics with wider communication (verbal and nonverbal communication included) that makes it seem that these nonverbal behaviours are pragmatic in nature.

Ifantidou (2013ab, 2014, 2016) has been exploring how relevance mechanisms can be exploited in L2 pragmatics acquisition research. In particular, she has explored how relevance theory assumptions can inform the assessment and teaching of L2 pragmatic competence in L2 readers and writers. Ifantidou (2014) uses Cummings' delimitation criteria as a basis for assessing pragmatic competence on account of the focus that she

adopts in her work, namely, pragmatic competence in L2 writers. Ifantidou assesses and teaches pragmatic competence as manifest in the writing of L2 learners, and explains (2014, p. 25):

For these reasons, condition 1 above serves the purposes of instruction and testing of L2 pragmatic competence, as administered in this work, in that data in the form of written stimuli are used to trigger a definite, salient interpretation (strongly communicated implicature) rather than “an array of roughly similar conclusions” or a “diffuse impression” (weakly communicated implicatures) (Wilson and Wharton 2006: 1569).

The pragmatic features that we test and teach naturally depend on the skills that we are addressing: writing, reading, speaking or listening. While discarding non-verbal means of communication may be well justified in certain contexts of L2 instruction and assessment, they play a central part in the context of the present thesis, which is concerned with triggering not only definite, salient interpretations, but also ‘an array of roughly similar conclusions’ (Wilson and Wharton, 2006, p. 1569). In other words, ostensive paralinguistic cues may be used to infer that there is more to the speaker’s meaning than what is said, and the ‘more’ may indeed be a ‘diffuse impression’, difficult to pin down in definite propositional terms.

From the perspective of the present study, recognising the pragmatic role of non-verbal communication is essential, as paralinguistic cues play a major part in the pragmatics of oral communication. This is illustrated by the following two points. Firstly, prosody and gesture can be used to trigger salient and definite interpretations, and not all non-verbal communication is to be associated with weak communication. For example, a nod, in certain contexts, may clearly indicate contentment, approval, agreement, etc. (Wharton, 2009). And secondly, weakly communicated intentions and stimuli that trigger more than one plausible interpretation need to be considered, and crucially so, in the context of developing epistemic vigilance in L2 hearers.

This is precisely where learning to exploit multimodality in utterance interpretation can potentially help in taking the hearer to test interpretive hypotheses, evaluate his

own comprehension and reach one optimally relevant conclusion. As suggested in Chapter Two, it is possible that in his search for the optimally relevant interpretation the hearer goes beyond the speaker's meaning, accepting one interpretation that is as equally possible as another. This is how learners develop an ability to critically evaluate their own comprehension and adjust their epistemic vigilance, thereby creating new expectations. The present study urges L2 practitioners to explore and address instances of communication where attending to non-verbal/paralinguistic stimuli is key to interpreting speaker meaning. While it may not always mean that L2 hearers retrieve a definite interpretation, it reflects natural language and communication processes peculiar to English, and thereby contributes to their interlanguage development.

4.2.2 Ifantidou's definition and framework for assessing L2 pragmatic competence

Although the present work diverges from Ifantidou's (2013ab, 2014, 2016) in that it focuses on oral inferential comprehension and the use of non-verbal means of communication, it reflects and applies Ifantidou's definition of pragmatic competence as presupposing pragmatic awareness and metapragmatic awareness. At the root of her pragmatic competence assessment framework, Ifantidou (2014) provides definitions of pragmatic competence, pragmatic awareness and metapragmatic awareness. She defines pragmatic competence as the ability to use language for a specific purpose and to understand it in its interactional context. To complete this definition, she goes on to explain that pragmatic competence presupposes *pragmatic awareness*, defined as the ability to notice how the target language realises pragmatic effects, and *metapragmatic awareness*, the ability to 'explicate the link' between noticed input and its pragmatic effects (2013a, 2014), or, in other words, the ability to explicate the link between evidence and intention. Based on her definition, Ifantidou (2014, p. 149) develops the following framework for assessing L2 pragmatic competence:

- (a) identify relevant linguistic indexes (Linguistic Awareness/LA)
- (b) retrieve relevant pragmatic effects (Pragmatic Awareness/PA)

- (c) explicate the link between lexical indexes and pragmatic effects retrieved (Metapragmatic Awareness/MA)

In this original framework it is not assumed that (a) occurs before (b). In fact, in Ifantidou's study (2014) participants were found to first retrieve relevant pragmatic effects and then decide which linguistic markers guided them in the inferential process (2014, pp. 121-123). Ifantidou's definition of pragmatic competence thus assumes (2014, p. 149):

Pragmatic awareness, i.e. the ability to retrieve a number of relevant *positive cognitive effects* in the form of contextual implications – irony, disrespect, endorsement, dissociation, or amusement. It also assumes the ability to *metarepresent* the interpretive process from the recovery of meaning linguistically encoded to retrieval of meaning pragmatically inferred.

The above framework reflects the focus of Ifantidou's work assessing and teaching pragmatic competence in L2 writers. I shall now illustrate how I adapt her original framework to the assessment and teaching of pragmatic competence as manifest in oral comprehension guided by paralinguistic indexes.

4.2.3 Adapted framework for assessing pragmatic competence in L2 hearers

The major difference between Ifantidou's framework (2014) and the version of the framework adapted to the present study is the integration of ostensive paralinguistic cues in the present framework. While Ifantidou's framework originally applied to written forms of verbal communication, this one applies to non-verbal cues. As a result, the link between (a) and (b) differs. I suggest that they occur concurrently:

- (a) Notice relevant paralinguistic indexes, pointers to their pragmatic role (Pragmatic Awareness – Attentional Abilities). This involves attending to ostensive paralinguistic stimuli, i.e. the speaker's ostensive behaviour, and recognising the stimuli as evidence of the speaker's intentions and as inputs to further inferential processing. The stimuli, as I propose, is prosodic pointing.

- (b) Retrieve relevant pragmatic effects (Pragmatic Awareness – Inferential Abilities). This involves using the evidence procedurally to infer the speaker’s intended meaning.
- (c) Explicate the link between paralinguistic indexes and pragmatic effects (Metapragmatic Awareness).

In the proposed framework, linguistic indexes have been replaced by paralinguistic indexes, the focus of the thesis. In this adapted version of the framework, L2 interpreters of paralinguistic cues are believed to notice the cues as being ostensively produced. The hearer’s attention is focused on the speaker’s ostensive behaviour, namely her communicative intentions. At the same time, the hearer uses the speaker’s ostensive behaviour to infer the intended interpretation and (re-)assess his interpretive route on the basis of the speaker’s behaviour. Therefore, their retrieval of the speaker’s intention is concurrent with their identification of the cue itself. I name both (a) and (b) under Pragmatic Awareness precisely to reflect the fact that, unlike in the original framework, they occur concurrently in a single-phase process. Therefore, (a) and (b) together reflect the definition of pragmatic awareness provided below on page 97.

With prosodic pointing, the link between ostensive stimuli and the interpretive effects is noticed; one reason for this being that prosodic pointing as we have seen involves extra cues to ostension. The major difference between Ifantidou’s framework and the proposed framework can be understood in terms of MacNamara’s thesis (1972). MacNamara puts forward the claim that language is learned by using ‘meaning as a clue to language rather than language as a clue to meaning’. Ifantidou’s framework is in line with this meaning-comes-first hypothesis. MacNamara (1973) also suggests that a great deal of that meaning is conveyed by paralinguistic cues (i.e. cues to ostension). The proposed framework therefore focuses on the latter part of MacNamara’s thesis, i.e. meaning inference via exploitation of cues to ostension and the interpretation of the act of communication, the utterance. In that sense, Ifantidou’s framework and the proposed model of instruction can be seen as complementary, as corresponding to different parts of the same process.

As the rest of this chapter and section 4.4.1 particularly will show, exploiting ostension to set the stage for new attentional biases is believed to help learners identify input as relevant (a). As recognising ostensive behaviour involves acknowledging the speaker's intention in producing that ostensive behaviour, it will encourage them to read their interlocutor's intentions in producing ostensive stimuli (b). Awareness of the link between (a) and (b) and access to (a) is especially important for the learners' recognition of paralinguistic cues as relevant input and for the learner's development of epistemic vigilance in the L2.

I define pragmatic awareness as the hearer's orientation or alertness to speaker's ostensive behaviours as cues to her intentions (Ifantidou, 2014). It is, at the same time, the hearer's ability to reassess his interpretative route so as to go from a relevant enough interpretation to the one that is more likely to have been intended by the speaker. Thus, I follow Ifantidou (2014, 2016) in including epistemic vigilance as an integral part of pragmatic awareness and therefore as part and parcel of pragmatic competence (Padilla Cruz, 2013a). I define metapragmatic awareness as the explicit and conscious linking of specific cues to specific intentions (Ifantidou, 2014). The adapted framework reflects my emphasis on pragmatic competence as ostensive-inferential competence as developed in L2 hearers. It will be reviewed and updated in section 4.4.3 to reflect the Noticing-as-Ostensive (NaO) model.

As I have already suggested, the general lack of inclusion of paralinguistic forms of language in L2 pragmatic development and listening instruction research contributes to the four identified pragmatic problems in L2 learners (Padilla Cruz, 2013a). This is the gap that the present thesis contributes to address. Section 4.3 will further support my rationale for using prosodic pointing to test the revisited framework and facilitate the development of pragmatic competence as defined in section 4.1.4.

4.3 Towards a relevance-theoretic model of instruction

4.3.1 The relevance of relevance theory to (I)SLA models

The motivations behind cognitively inspired models of L2 processing are based on the acknowledgment that ‘SLA theories need to be anchored in models of general human cognitive capacities and universal pragmatic principles to explain L2 mechanisms’ (Jodłowiec, 2010, p. 56). Relevance theory is a good candidate for an analytic tool which can contribute to a better understanding of the inner workings of the L2 learner’s mind and deeper insights into the mechanisms underlying SLA (Taguchi, 2002; Žegarac, 2004; De Paiva and Foster-Cohen, 2004; Nizegorodcew, 2007; Jodłowiec, 2010). Žegarac (2004) shows that the search for optimal relevance guides the processing of information, whether in L1 or L2 English. Taguchi (2002) reports that language learners seem to process utterances for relevance, and in so doing, test, reject and select one most relevant interpretation. Thus, SLA studies conducted along relevance-theoretic lines corroborate relevance theory assumptions, and there seems to be every indication that relevance mechanisms are non-language specific: ‘the pragmatics of the comprehension process work in exactly the same way as for native speakers.’ (Foster-Cohen, 2000, p. 89). Jodłowiec (2010) argues that this has implications for SLA research because reasoning that is typical of utterance comprehension procedure in any language is likely to be repeated in processing target language input. Relevance theory has therefore been used in SLA studies to make assumptions about SLA mechanisms. However, there has been less attention paid to how these assumptions can inform instructed second language acquisition (ISLA).

Relevance theory’s communicative principle has been used to enhance instructional input in form-focussed instruction (FFI) for example by Nizegorodcew (2007). On the basis that the L2 hearer typically processes information for optimal relevance and understands input in terms of speaker’s intentions, Nizegorodcew tested how the L2 instructor can act on it to facilitate the detection and processing of target forms in the input. She speculated that L2 learners would reach an optimal interpretation of the teacher’s input, namely that they would understand the relevance of the input by reference to the instructor’s intentions. In the context of Nizegorodcew’s study (2007,

p. 93), the input is *instructional* input, described as ‘the language intentionally presented by the teacher to facilitate the process of L2 learning’. The relevance of instructional input is assessed in terms of its pedagogic effect in the context of a pedagogical task, and the input is only relevant to the learner as an L2 learner, not as an L2 communicator and interpreter. By exploiting the learner’s ability to read the teacher’s intentions and understand the input in relation to the pedagogical task, instruction focuses learners’ attention on a linguistic – often lexical or grammatical – item. Nizegorodcew’s study is just one example of work that sees the role of relevance theory as enabling awareness of L2 form and function to emerge from processing target language input (Jodłowiec, 2010). It illustrates how relevance theory has mostly been used to facilitate the development of L2 learners’ linguistic competence and promote the decoding of encoded meaning and form-function mapping in the L2 learner’s mind rather than the inferring of speaker meaning.

Although relevance theory’s communicative principle was shown to inform input enhancement techniques in FFI, using relevance theory’s principles to raise L2 learners’ awareness of form and function can be viewed as unnatural. It promotes ‘pragma-linguistic strategies’ (Jodłowiec, 2010), which assume a focus on bottom-up processing from linguistic form to encoded pragmatic meaning. These strategies do not reflect the foundational claim of relevance theory. In sum, they do not reflect the fundamental role of attentional and inferential processes in processing and interpreting input. They also do not reflect the importance of top-down processing in understanding input from the perspective of its user, which is key to relevance theory’s model of human communication. I endorse the view that applying relevance theory to instruction that focuses on the acquisition of vocabulary and grammar has abstracted away from a more important implication of relevance theory for the L2 learner’s interlanguage development. In promoting form-function mapping and pragma-linguistic strategies, I contend that those applications of relevance theory to L2 instruction have missed the point of relevance theory and the core of what it tells us about the nature of language and communication. Essentially, relevance theory claims that there is more to communication than the mere decoding of linguistic stimuli. Thus, using relevance theory’s comprehension heuristic to develop L2 inferential comprehension mechanisms would do the theory’s fundamental claims more justice.

The inferential recognition of speaker's intentions plays a central part in the communication and interpretation of meaning. This includes recognising ostensive cues as pointers to speaker meaning and using these cues towards making the correct inference about the speaker's intentions. Relevance theory's central claims about intention-oriented communication and interpretation bear significant implications for ISLA research focused on the development of inferential and interpretive competence in L2 hearers and those should be further exploited (Padilla Cruz, 2013ab, 2016ab).

As emphasised earlier in this chapter, Ifantidou moved away from a focus on form-meaning mapping, since her pragmatic competence development framework reflects the idea that meaning is used as a cue to language by L2 readers. To my knowledge, she was the first to address L2 comprehension as a genuinely inferential process, within relevance theory and generally (Ifantidou, 2013ab, 2014), and the implications of this for L2 instruction (Ifantidou, 2014, p. 12):

It is the inferential phase of communication and its positive effects on pragmatic development that this work intends to explore extending the argument to verbal communication in the L2.

She adds that 'raising pragmatic competence-as-spontaneous-inference in learning environments should be a feasible, albeit challenging, task' (Ifantidou, 2014, p. 6). The present work is intended as contributing to such research studies, which rely on relevance-theoretically informed assumptions about the L2 learner's pre-existing inferential abilities and their pivotal role in instruction that aims to develop pragmatic competence in L2 learners, and more specifically in L2 hearers (Padilla Cruz, 2013ab). What we know about the nature of language and input processing from relevance theory should translate into models of instruction that specifically aim to reproduce those inferential cognitive processes as a basis for pragmatic development in the L2 hearer. These models of instruction should involve engaging the L2 hearer in the context of a mental activity where the input they are made to attend to is relevant to them as interpreters. Relevance theory should be used to engage L2 learners in mental activities reproducing intentional communication and focusing them on interpreting communicative intentions rather than in pedagogical tasks focusing them on the

teacher's intentions in drawing their attention to target forms in the input. This will be further discussed later in this chapter. Using relevance theory to inform theories of SLA and models of ISLA involves those theories of SLA and models of ISLA being in line with relevance theory's view of communicative acts as ranging from meaning to showing and from strong to weak communication, as described in Chapter Two and earlier in this chapter. In other words, using relevance theory in SLA research must imply that practitioners come to grip with the fact that a theory of language comprehension and language learning must take into account and accommodate to those parts and parcels of language that are not linguistic in nature and do not encode anything but are used procedurally by the hearer to guide and fine-tune their interpretation of the speaker's intended meaning.

The adult comprehension procedure as presented by relevance theory is consistent with MacNamara's thesis (1972), according to which infants have a natural inclination towards reading mental states in their interlocutors. They are also found to learn their first words by using 'meaning as a clue to language, rather than language as a clue to meaning', as stated earlier in this chapter. What this means is that the cognitive abilities involved in first language learning are the same as those involved in adult inferential comprehension:

Just as children are required to attribute intentions and interpret natural cues in order to acquire word meanings, so adult hearers must do so in order to interpret successfully the words they hear.

(Wharton, 2014, p. 479)

Those 'natural cues' involve paralinguistic contextual cues to ostension picked out by attention as guiding cues to interpret what a speaker means by *that*, i.e. the words they have chosen to use. Bloom (2001) also concludes that children, from an early age, acquire word meanings by attending to their user's intentions and, as a result, successfully attribute intended meanings to words. MacNamara's claim (1972) not only further supports the relevance of relevance theory for L2 development, but it also supports my view against the traditional form-to-meaning model of input processing. L2 instruction has traditionally put emphasis and encouraged excessive reliance on

linguistic input as seen in Chapter One. FFI in particular reflects a form-to-meaning model of communication and language acquisition that fails to represent the universally shared cognitive mechanisms driven by a genuine desire to read our interlocutor's mind and understand language – in all its various forms – in terms of speaker's intentions.

It seems fair to ask why, if speakers of any language are expected to rely on intention-based mechanisms and to be capable of mindreading as proposed above, adult L2 learners are still found to have trouble reading their interlocutor's mind and carrying out top-down processing (Padilla Cruz, 2013a). Part of the answer, I argue, lies in the traditional form-focused model of instruction, which focuses learners' attention on linguistic input and overlooks the communicative value of non-linguistic forms of language. These universals of human cognition are not sufficient for learners to be pragmatically competent in their L2 (Foster-Cohen, 2000, 2004; Zufferey, 2014). Although relevance mechanisms are not language-specific and adult learners possess the cognitive ability to draw inferences, not using the relevant input to inferential processing can lead to making the wrong inference. This means that L2 learners will still have to learn how and how much the target language – in both its linguistic and non-linguistic forms – interacts with pragmatic principles. In Chapter Three, we saw that the use of contrastive stress may either be ruled by structural and grammatical constraints specific to a language, as in Italian, or it may be pragmatically-driven and a reflection of the speaker's decisions and intentions, as is the case in English. These differences illustrate some of the reasons why relevance mechanisms may not be sufficient when it comes to developing pragmatic competence in an L2 in general and in L2 English specifically. What is not governed by grammar or structure rules has to be worked out by reference to the speaker's intentions. Thus, L2 instruction has an important role to play in fostering the L2 hearer's marked orientation towards the speaker's non-verbal communicative behaviours and their reading as ostensive cues that are to be picked out by the hearer's attention and used in inferential processing. The kind of stimuli that the L2 hearer is expected to respond to and use as input to inferential processes is subject to language-specific rules. More precisely, what is to be learned is language-specific attentional biases. What is shared in terms of universal relevance-oriented and shared intentionality mechanisms should be exploited in the

process of refocusing the learner's attention to language-specific stimuli (i.e. paralinguistic stimuli) and enhance their ostensive-inferential competence. To my knowledge, no studies have attempted to apply relevance theory to a model of instruction that aims at enhancing pragmatic competence in L2 hearers via exposure to paralinguistic inputs.

The mental processes involved in taking in input are crucial for the development of interactive abilities in the L2 learning context (De Paiva, 2003), and even more so for the development of interactive abilities in L2 English, as English gives a particularly important role to pragmatic inference. That is why I argue that these processes should be exploited specifically for developing these interactive abilities in L2 interpreters rather than for input enhancement techniques that foreground encoded meaning and confine the learner to the behaviour of a learner over that of a communicator. Relevance theory, by offering a predictive and explanatory account of the mental processes that are pivotal for input processing, should provide support for theories of SLA focusing on input processing and *inferencing*. This idea is reflected in De Paiva and Foster Cohen's work (2004), which provides important insights into how relevance can, by way of combining with SLA models, inform L2 instruction that focuses specifically on assessing inferential and interactive abilities. De Paiva and Foster-Cohen not only support the role of relevance theory in SLA studies, but they also show how relevance theory's key principles can complement existing information-processing models of SLA. In section 4.3.2, I take De Paiva and Foster Cohen's suggestions further and dig deeper into the relation between relevance theory and Schmidt's Noticing Hypothesis (1990) and the role of relevance theory in offering a solid cognitive ground for the Noticing Hypothesis to translate into a more psychologically viable model of L2 instruction.

4.3.2 Relevance theory and the Noticing Hypothesis

One definite step forward in showing the relevance and applicability of relevance theory to L2 acquisition and instruction models is De Paiva and Foster-Cohen's work on the relationships between relevance theory and SLA models (2004). They shed light on how relevance theory can make an even greater contribution to SLA research

when combined with existing L2 information-processing acquisition models (De Paiva and Foster-Cohen, 2004). Specifically, they argue that relevance theory's central claim – that cognition is geared towards the maximisation of relevance – complements Schmidt's Noticing Hypothesis (2001, p. 3). Schmidt's main argument is that attention is the necessary condition for noticing, and that awareness at the level of 'noticing' is a prerequisite to learning (Schmidt, 1995). De Paiva and Foster-Cohen exploit what they see as a gap in Schmidt's Noticing Hypothesis: it is not clear what makes a form noticeable by the language learner. While noticing is the condition for learning, Schmidt's theory does not state what the condition for a form to be noticed is. De Paiva and Foster-Cohen (2004, p. 284) thus support the need to complete the Noticing Hypothesis by claiming that 'relevance will determine what is attended to, and therefore what is noticed'. De Paiva and Foster-Cohen draw particular attention to the usefulness of the relevance-theoretic notion of manifestness in completing Schmidt's Noticing Hypothesis: the manifestness of a form will make it likely to be noticed, and subsequently learned. Therefore, if the manifestness of a form correlates with its relevance, then the more manifest a form is, the more likely it is to be noticed and used as input to cognitive processes, and subsequently learned. The correlation between manifestness and noticing seems even stronger when reading Schmidt's words (2001, p. 3): SLA is largely driven by: (1) 'what learners pay attention to and notice in target language input' and (2) 'what they understand the significance of noticed input to be.' Schmidt's use of 'significance' can be understood as equivalent to relevance. It certainly gives further support to De Paiva and Foster-Cohen's suggestion that the points of contact between relevance theory and Schmidt's Noticing Hypothesis should be exploited. However, De Paiva and Foster-Cohen's approach needs to be taken further to fully exploit the relationship between relevance theory and the Noticing Hypothesis. Essentially, De Paiva and Foster-Cohen propose that relevance theory comes to fill a gap in the Noticing Hypothesis.

My view is that it does more than fill a gap. It can be used to revisit Schmidt's hypothesis and its core assumption. As recently put forward by VanPatten (2017), Schmidt's Noticing Hypothesis (1990) needs to be anchored in a cognitive theory of input processing. It would give the hypothesis a more solid cognitive grounding and make it a more psychologically plausible theory of SLA, one that can more likely

translate into a model of ISLA. I argue that from a relevance-theoretic perspective, noticing and processing of stimuli does not only arise from the stimuli being manifest, but from their being mutually manifest. Relevance theory's notion of mutual manifestness, and more crucially that of ostension, have more to contribute than manifestness, because of the way they tie in with the recognition of intentions. They also fit Schmidt's hypothesis more closely, as noticing is seen by Schmidt as conscious noticing, which the mutual component and ostensiveness of the communicative act can potentially help with. Noticing input as ostensive or as evidence of an intention can potentially help the development of metapragmatic awareness, namely the ability to explicate the evidence-intention relationship. Therefore, I will focus primarily on the relevance-theoretic notion of ostension as I argue that it is what is missing for the Noticing Hypothesis to be psychologically plausible and for it to apply to the present study. The Noticing-as-Ostensive (NaO) model will be used and integrated into the pragmatic competence framework at the end of section 4.4.

In section 4.4, I focus on the constructs of salience and attention, which are pervasive in SLA. I suggest that the notions of ostension and shared attention, ubiquitous in ostensive-inferential communication, have more to contribute and bear important implications for (I)SLA and particularly for instruction focused on developing pragmatic competence in L2 hearers. This further contributes towards showing why prosodic pointing is special and particularly worth exploiting along with a relevance-theoretic approach to pragmatic competence development.

4.4 The Noticing-as-Ostensive (NaO) model

4.4.1 Salience in SLA: perceptual, constructed, and grounded salience

The construct of salience pervades SLA (Ellis, 2018). Salience, in general terms, refers to 'the degree to which something stands out in the crowd or catches a person's attention' (VanPatten and Benati, 2010, p. 143). Achieving salience is seen as critical to language acquisition (Tomlin and Villa, 1984) and is done either by the explicit actions of the teacher or by some internal mechanism of the learner. Those explicit actions of the teacher to make target language forms salient and noticeable by the L2

learner have been the core business of FFI. Along with salience, the notion of attention and attentional processes have been equally central to SLA and ISLA research, which sees attention as a major factor in processing and understanding input (Schmidt, 2001). As the previous section suggested, Schmidt (1990) sees attention as the necessary condition for conscious noticing or awareness at the level of noticing, which he believes is a prerequisite to language learning. The questions at the centre of FFI therefore are: (1) what is it that L2 learners attend to and (2) what to do to make the target features more salient to learners? (Schmidt, 1995). Salience achieved through input enhancement techniques is generally understood as ‘constructed salience’, that is: ‘when an outside source creates a context for some feature to become prominent’ (Gass, Spinner, and Behney, 2018, p. 8). Those attention-drawing techniques for learners to ‘notice the feature and potentially subsequently process that feature’ (Gass, Spinner, and Behney, 2018, p. 9), involve techniques using visual highlighting and/or prosodic prominence. The prosodic characteristics of a form, and its prosodic prominence in particular, is likely to make L2 learners attend to it (Schmidt, 1995). Typically, however, constructed salience involves a deliberate focus on formal properties of language, not on the stimulus (i.e. its prominence) itself. These input enhancement techniques are generally used for the teaching and learning of lexical or grammatical items, where the object of learning is the target form itself and the function that the linguistic form encodes.

Perceptual salience, on the other hand, is a characteristic and property of the input or stimulus itself and comes as a result of its interaction with the recipient’s internal mechanisms. In the context of instructed learning, perceptual salience may be exploited to draw the learner’s attention to inputs to the comprehension process. The input is not the target form to be noticed and learned, but it is *input to* cognitive processes pivotal to inferential comprehension. This type of input is not an end in itself, but a means to an end. This shows that the motivations for and pedagogical implications of using constructed or perceptual salience are different. So, while the former is used typically for developing knowledge (lexical or grammatical skills), focusing the learner’s attention on linguistic forms of language, and encouraging them to rely on form-meaning mapping, the latter can be exploited for developing competence, focusing the learner’s attention on paralinguistic forms of language as

evidence of speaker intention and encouraging them to rely on mental processes that are pivotal to inferential comprehension. The latter is therefore the one that I am using in the present study. Another way to see the difference is by using VanPatten's distinction between pedagogical activity and mental activity (2017). Constructed salience is created for the purpose of and in the context of a pedagogical activity. By contrast, the focus of a mental activity is on the learner's internal mechanisms believed to lead to acquisition by reproducing processes that we know are pivotal for input processing and L2 learning (VanPatten, 2017). Although the present context of instruction is pedagogical, perceptual salience is used to engage the L2 hearer in mental activities reproducing cognitive processes pivotal to inferential comprehension and the development of pragmatic competence.

The idea supported by FFI practitioners, that making a form salient will help learners understand the significance of the input, is criticised by Carroll (1999). SLA researchers have largely assumed that salience leads to acquisition, but, as Carroll (2012) remarks: they may have it backwards (Gass, Spinner, and Behney, 2018). She supports the claim that salience is an outcome of learning and only becomes relevance once prior input sets the stage for recognition (Gass, Spinner, and Behney, 2018). I agree with her criticism for the reasons presented in section 4.2. I focus on how learners identify indexes as relevant in the first place (a), and on how this is dependent on whether they understand how (a) and (b), and (b) and (a) relate. Carroll's prior-input argument means that the notion of salience itself is not enough to make it relevance in the learner's mind. Therefore, there needs to be exposure to this first input, which needs to be more than salient. This prior input that sets the stage for the recognition of salience in the sense of relevance is what exposure to prosodic pointing attempts to do in the present study. Prosodic pointing as a natural highlighting device and deictic phenomenon can be used for refocusing attention and setting new attentional biases, in that it is more than a salient feature; it is an ostensive one. It has the potential to not only focus the hearer's attention, but also focus it on the speaker's intentions and reasons for her ostensive behaviour, thereby making it more likely for the L2 hearer to process the input for pragmatic effects.

Another advantage of using prosodic pointing can be seen from the way it interacts with the learners' expectations or lack thereof. 'Grounded' or surprisal salience emerges from the unexpectedness of a linguistic or paralinguistic feature in the input (Cintron and Ellis, 2016). As Gass, Spinner, and Behney (2018, p. 8) point out, 'the L1 provides a platform for expectations, and, hence, salience'. Features of the L2 that are frequent and expected from learners because they appear in their L1 are likely to be salient to them. Equally, a feature is likely to be salient to the L2 learner if it is not a characteristic feature of the learners' L1 and therefore not expected due to its 'low probability of occurrence' Racz (2013). As Gass (1988, p. 202) points out:

Particularly at more advanced stages of learning, stages at which expectations of language data are well established, something which is unusual because of its infrequency may stand out for a learner.

For example, a learner who does not expect paralinguistic behaviours, or certain paralinguistic behaviours by virtue of not having them in their L1, will not expect them in the L2. When the learner encounters those paralinguistic behaviours in their L2, that creates space for salience (Gass, 1988). If those paralinguistic behaviours or stimuli are ostensive, thereby creating the hearer's expectation that paying attention to them will be cognitively rewarding, then it can be speculated that new attentional biases will be created. Creating new attentional biases or setting the stage for recognition of relevant input for learners to pay attention to features that would have otherwise gone unnoticed, bears further implications and advantages from the perspective of interlanguage development. It can make L2 learners notice the gap between the input and their interlanguage (i.e. their developing L2, which preserves some features of their L1), which is believed to help prevent pragmatic fossilisation (Romero-Trillo, 2002). Thus, in the light of these considerations, exposure to prosodic pointing, which implies a focus on ostensive paralinguistic behaviours, presents a number of advantages.

4.4.2 From constructed salience to ‘pointing’

Salience represents an act of pointing, a directedness of the person toward something that at the moment has special significance for him.

(Allport, 1937, p. 553)

Allport (1937) here relates salience to an act of pointing. In interaction, however, this act of pointing, as we have seen in Chapters Two and Three, is more than just salient: it is ostensive. While FFI gives a particularly important role to constructed salience, I argue that ostension has more to contribute, and that this is precisely where relevance theory bears key implications for L2 instruction models focused on the development of inferential and interpretive competence. Ostension involves more than salience. It involves salience and the speaker’s intention to make a feature salient. In relevance-theoretic terms, salient means accessible and available. Thus, relevance theory is in line with Carroll’s criticism (1999, 2002) in that it entails that something makes the input or interpretation it leads to salient or more salient than any other competing interpretations. Crucially, pointing involves shared salience and shared attention, rather than salience and attention alone, thereby allowing for the shared attention mechanisms underlying inferential comprehension to take place.

Although FFI was introduced as associated with a communicative language teaching approach (Ellis, 2015), I argue that the very nature of constructed salience and the focus on linguistic input that it prescribes makes it unlikely to help develop L2 interactive abilities. Ellis (2015, p. 4) defines focus-on-form as ‘an opportunity to take ‘time out’ from focusing on message construction to pay attention to specific forms and the meanings they realize.’ In a similar vein, De Paiva and Foster Cohen (2004, p. 284) describe FFI as focusing learners’ attention on form ‘rather than on communicative intention’. Ostensive behaviour or speaker behaviour, as opposed to prefabricated salience, not only claims the hearer’s attention, but by doing so also draws attention to the speaker’s intention to draw attention, hence manifestness being mutual to both hearer and speaker. As seen in Chapter Two, relevance theory stipulates that an ostensive stimulus fulfil two conditions: it should first attract the audience’s attention, then focus it on the speaker’s intentions (Sperber and Wilson, 1986/1995, p.

153). Thus, I reiterate that ostensive behaviour or stimuli such as prosodic pointing be the essential condition for the learner to identify indexes as relevant inputs to further inferential processing.

Drawing on earlier reflections about instructional input enhancement techniques, I will provide one further example of research where constructed salience is exploited, in order to show how this compares to using prosodic pointing. This will further justify my decision to use prosodic pointing as a natural highlighting device and my hypothesis that it will help enhance pragmatic competence in Chinese L2 hearers. Burri, Baker, and Acton (2016), specialists in teaching English to Japanese L2 learners, have been promoting a ‘haptic approach’ to teaching pronunciation, also described as kinaesthetic-based pronunciation teaching, where pronunciation is learned in association with kinesics. Their so-called Rhythm Fight Club approach involves using a boxing-like gesture on stressed syllables (Burri, Baker, and Acton, 2016). In more recent research (Burri, Baker, and Acton, 2019), they focus their attention on using their haptic approach for the teaching of L2 pragmatics, drawing our attention to the relationship between phonological and pragmatic competence: ‘pragmatics is closely linked to the sound system (i.e. phonology) of the language.’ (2019, p. 2). As part of this research, they use what they call ‘touchinamis’, namely ‘a systematic gesture that combines movement and touch for learners to experience an intonational contour and prominence within a prefabricated language chunk’ (2019, p. 7). This is yet another example of constructed salience. Touchinamis involve prefabricated salience, which does not relate to communicative intentions. It does not exploit the natural, almost biological, interaction between sound and gesture. Instead, it uses gesture and touch on top of sound for purely pedagogical purposes.

Although their approach has shown to be effective, I have a number of reservations. First, their research focuses on teaching pronunciation for intelligibility from the speaker’s perspective. It is yet another study focusing on the speaker’s behaviour and L2 pragmatics as mostly reflecting social competence: ‘pronunciation strongly influences intelligibility; it also conveys social meanings and thus has social consequences’ (Burri, Baker, and Acton, 2019, p. 5). Finally, and most importantly, I question how reflective of natural language the use of touchinamis or the boxing-like

gesture is. It is not exploiting the natural interaction between prosody and gesture. Prosody-and-gesture are not used together in a communicative way. In the light of the biological argument presented in Chapter One particularly, I argue that there are opportunities to use paralinguistic phenomena that naturally work in tandem in a way that is communicative, to enhance pragmatic competence in the L2 interpreter. It gives prosodic pointing a real advantage it seems, in that it relies on natural behaviours that are reflective of natural language use. They are ostensive in that they are designed to be picked out by attention and understood in relation to the speaker's communicative intentions. Prosodic pointing as a natural multimodal phenomenon thus appears as having great potential for enhancing pragmatic competence in L2 hearers.

4.4.3 Integrating the NaO model into the pragmatic competence framework

The revisited pragmatic competence framework integrating the Noticing-as-Ostensive (NaO) model of instruction is as follows:

- (a) Notice as ostensive – identify relevant paralinguistic indexes as evidence of an intention (Pragmatic Awareness – Attentional Abilities).
- (b) Retrieve relevant pragmatic effects – understand intentions in relation to the evidence (Pragmatic Awareness – Inferential Abilities).
- (c) Explicate the link between paralinguistic indexes and pragmatic effects – between evidence and intention (Metapragmatic Awareness).

4.4.4 Hypothesis and theoretical implications

The theoretical development outlined in Chapters One to Four has led me to hypothesise that:

Exposure to prosodic pointing, as ostensive multimodal input, will play an important role in setting the stage for Chinese L2 hearers' recognition of relevance, raising their pragmatic and metapragmatic awareness and improving their pragmatic competence.

Testing this hypothesis and exploring the effectiveness of the proposed model of instruction will allow me to explore and address five implications of the hypothesis related to:

- The relevance of relevance theory for L2 pragmatic competence development**
- The development of epistemic vigilance as part and parcel of pragmatic competence**
- The relationship between awareness and competence**
- The ‘special’ role of prosodic pointing and the multimodal argument**
- The implications of exposure to prosodic pointing for Chinese L2 hearers**

4.5 Conclusion

In Chapter Four, I demonstrate how my relevance-theoretic model of instruction might apply Ifantidou’s pragmatic competence development framework (2014) to oral inferential comprehension based on access to and interpretation of prosodic pointing. I have introduced this relevance-theoretic assessment and instruction model as the Noticing-as-Ostensive (NaO) model. I have also articulated my hypothesis that prosodic pointing, as a form of ostensive multimodal input, will play an important role in setting the stage for Chinese L2 hearers’ recognition of relevance, and in so doing, enhance their pragmatic competence. Chapter Five discusses the methodological choices behind the intervention study which will test the hypothesis.

Chapter Five

The intervention study: research design and methodologies

5.0 Introduction

The previous chapter explained how relevance theory and Ifantidou's pragmatic development framework can inform a model of instruction which aims at enhancing ostensive-inferential competence and epistemic vigilance in Chinese L2 hearers, which I have called the Noticing-as-Ostensive (NaO) model. In Chapter Four, I also articulated my hypothesis that prosodic pointing, as a form of ostensive multimodal input, will play an important role in setting the stage for Chinese L2 hearers' recognition of relevance, and in so doing, enhance their pragmatic competence. In Chapter Five, I discuss the methodological choices behind the intervention study which will test the hypothesis. It is divided into two main parts: Part One introduces the mixed methods research design, Part Two the methods of the pre- and post-test intervention.

5.1 Discussion of methodology

The present intervention study has a dual purpose. It aims (1) to test whether and (2) to explore how exposure to prosodic pointing in English can help in developing awareness of the pragmatics of prosodic pointing and enhance pragmatic competence in Chinese L2 hearers. This attests to my interest in exploring, on the one hand, the outcomes and effectiveness of the instruction under investigation, and, on the other, the developmental processes brought about by the instruction itself. These motivations call for a mixed methods research methodology, and more specifically for a QUAN-QUAL triangulation research design. A longitudinal perspective matches the purpose of gaining deeper insights into the effects of an intervention on both learners' pragmatic awareness and competence as well as into what in the intervention seem to have been particularly effective.

5.1.1 Mixed methods in applied linguistics research

Applied linguistics is, by definition, interdisciplinary and, as such, relies on cross-disciplinary dialogue. Applied linguistics researchers are therefore inclined to conceptualise research problems using more than one research strand: as Riazi (2016) explains, the methodologically pluralistic characteristic of mixed methods research seems to be in line with the interdisciplinary nature of applied linguistics. In SLA research, the quantitative strand of mixed methods research, as it is in the present study, is often attached to an experimental design which involves the testing of a specific hypothesis and, at the same time, the effectiveness of a method. This can be, for example, ‘a study comparing student test results before and after an instructional treatment.’ (Mackey and Gass, 2016, p. 3). When testing the effectiveness of a pedagogical treatment, the motivations for using mixed methods research as a methodology may lie, as in the present study, in the researcher’s interest both in the outcomes of the treatment and in the treatment itself or the developmental processes brought about by the treatment. In other words, mixed methods research is concerned with both the verification-oriented nature of the quantitative data used to reveal *whether* or not the treatment was effective and the hypothesis valid, and the discovery-oriented nature of qualitative data used to interpret *how* and what in the treatment was particularly effective or ineffective, which can help in refining the underlying hypothesis. This is in line with what Hashemi (2013, p. 207) describes in his reflections on mixed methods research in applied linguistics: ‘The qualitative exploration of the processes and quantitative measurement of the outcomes in a concurrent design [...] provide a more complete picture of the phenomenon under study.’

In the context of the present research, the first and most obvious reason for mixing methods is that using only one type of data fails to fully address the research problem, which, as we have seen, has two separate dimensions. While the study tests whether or not exposure to prosodic pointing raises Chinese L2 hearers’ pragmatic awareness and enhance their pragmatic competence, it also explores the developmental processes involved in the intervention and whether the two seem to coincide. Based on Ifantidou’s definition of pragmatic competence (2014) and my definition of ostensive-

inferential competence, it can be assumed that competence-related change presupposes awareness-related growth. Therefore, evidence of raised awareness can help in further determining whether the intervention had the expected effect on pragmatic competence development. In order to gather potential evidence of metapragmatic awareness, pragmatic awareness and pragmatic competence, a range of research methods are called for.

5.1.2 Mixed research methods

As part of the experimental design, pre- and post-test questionnaires¹⁵ were used to test the metapragmatic awareness, pragmatic awareness and pragmatic competence of Chinese L2 hearers before and after the intervention. The pre- and immediate post-test questionnaires, administered in weeks 2 and 11 to both a main group (or experimental group) and a control group, framed the intervention, as illustrated in the July-September 2017 timeline below. A delayed post-test questionnaire was administered to the main group in June 2018.

¹⁵ For details of the questionnaires, see Appendix One.

Figure 1 Timeline for the intervention

Week 1:	Pre-sessional students arrive and settle into the UK and onto the course
Week 2:	The researcher introduces the project to students, gives them time and opportunities for questions and collects the participant consent forms ¹⁶
End/week 2:	Administration of the pre-test questionnaire to both main and control groups
Weeks 3/4:	Stage 1 / first input-and-recall one-to-one session with main group
Weeks 6/7:	Stage 2 / second input-and-recall one-to-one session with main group
Weeks 7/9:	Listening journal
Weeks 9/10:	Stage 3 / third production-oriented one-to-one session
End/week 11:	Administration of the immediate post-test questionnaire to both main and control groups
June 2018:	Administration of the delayed post-test questionnaire to main group participants

The pre- and post-test questionnaires consisted of both quantitative and qualitative items. The qualitative questions were designed to test metapragmatic awareness and pragmatic awareness. Those involved a sentence completion item asking the respondents about the role of intonation in English in pre-and post-test questionnaires. Responses to this question were believed to potentially provide evidence of L2 hearers' alertness to the pragmatic role of contrastive stress, namely as a device pointing the hearer towards the speaker's intentions. By explicating the link between

¹⁶ For details of the participant information sheets and consent forms, see Appendix Two.

contrastive stress and the intention that it is used to convey, the L2 hearer would demonstrate metapragmatic awareness. The immediate and delayed post-test questionnaires also included behavioural items questioning the respondents on perceived change in their listening and speaking strategies at the end of the intervention and their exposure to English over the course of their first three months in the UK. Answers to these questions were expected to potentially reveal the participants' increased orientation to paralinguistic cues to ostension and, thereby, their enhanced awareness, and the potential knock-on effect of this on their exposure to the target language. While the post-test only items were interpreted qualitatively, the sentence completion item was quantified and statistically analysed to determine whether a difference between the respondents' pre- and post-test answers was found.

The quantitative items were designed to test pragmatic competence, that is the ability to attend to the speaker's paralinguistic cue(s) to ostension – here contrastive stress – and use it to infer the speaker's intended meaning. They involved the respondents reading utterances, underlining the word(s) that should carry contrastive stress and justifying their answers by explaining the meaning the speaker intends to convey. Although their justifications constituted qualitative data, it was quantified and was part of the respondents' pragmatic competence scores in pre-and post-test questionnaires. Nonetheless, it reflected the idea that metapragmatic awareness is an integral part of pragmatic competence. Access to the justifications could testify of better accuracy in stress placement and corresponding pragmatic explanation after exposure to the intervention.

Inferential statistics were used to determine whether the main group's pragmatic competence had improved in the post-test questionnaire. In other words, inferential statistics were used to help me confirm or reject my prediction that exposure to the intervention would enhance the main group's pragmatic competence (Field, 2009). By testing of group differences, I could infer that the difference between the groups was due to the experimental manipulation. The process was monitored and the results checked by an expert statistician.

The intervention itself involved introspective research methods. It consisted of three individual sessions occurring three weeks apart. Both stages 1 and 2 focused on comprehension, while stage 3 focused on production. Stages 1 and 2 were input-and-recall sessions where the participants¹⁷ were exposed to a dialogue involving instances of prosodic pointing used mainly on auxiliary verb forms to express agreement, disagreement or disconfirmation, pronouns to return questions and other lexical items to correct information.¹⁸ At stage 1, the participants had access to the audio-only version of the dialogue, while at stage 2 they had access to the audio-and-video version of the dialogue.¹⁹ At both stages 1 and 2, the participants were asked to answer comprehension questions related to their understanding of Speaker B's meaning²⁰ and to justify their answers. By asking participants to justify their answers, I expected them to report on what they had noticed as salient if anything (e.g. stress, facial expression, gesture). Sessions 1 and 2 were therefore testing the participants' metapragmatic awareness, that is their ability to link specific cues to specific intentions in a conscious way and to explicitly say which cues guided them to which interpretation (Ifantidou, 2014), and the participants' pragmatic awareness, namely their alertness to paralinguistic cues to ostension and their ability to retrieve an optimally relevant interpretation. Immediate recall was used to access participants' thought processes and potentially obtain evidence of pragmatic awareness and metapragmatic awareness. Immediate recall was crucial as a qualitative research technique in tracking potential development of epistemic vigilance triggered by exposure to prosodic pointing at stage 2 of the intervention. Participants' use of paralinguistic cues at stage 2 to reflect on and amend their interpretation would demonstrate evidence of them adjusting their epistemic vigilance and developing pragmatic awareness in English.

At stage 3, the participants had to use prosodic pointing to answer yes/no questions and correct information. Between stage 2 and stage 3, the participants were asked to keep a listening journal to record instances of prosodic pointing encountered outside the classroom. The procedure for the study, including both pre- and post-test

¹⁷ For detailed information about participants, see section 5.3.

¹⁸ For access to the dialogue, see Appendix Three.

¹⁹ Access to the audio-and-video version of the dialogue can be provided upon request.

²⁰ The speakers in the dialogue are referred to as Speaker A and Speaker B.

questionnaire items and the intervention's methodologies will be outlined in section 5.4 and 5.5 respectively.

The data obtained from the questionnaires was used to measure the outcomes of the intervention in terms of its effectiveness in raising awareness and enhancing competence of Chinese L2 hearers. The introspection-based data was intended to give me an insight into the intervention itself and allow me to track developmental processes. My interest lied in determining whether the interpretation of the introspection-based data and the statistical analysis of the quantitative-based data seemed to coincide.

Mixed methods research has certainly participated in promoting a deeper understanding of the field of SLA as a whole, and it has largely contributed to broadening the scope of its goals (Ortega, 2014). The flexibility of mixed methods research is well suited for the complex and dynamic fields of SLA and applied linguistics. However, it needs to be optimised by drawing a clear rationale for choosing a mixed research design.

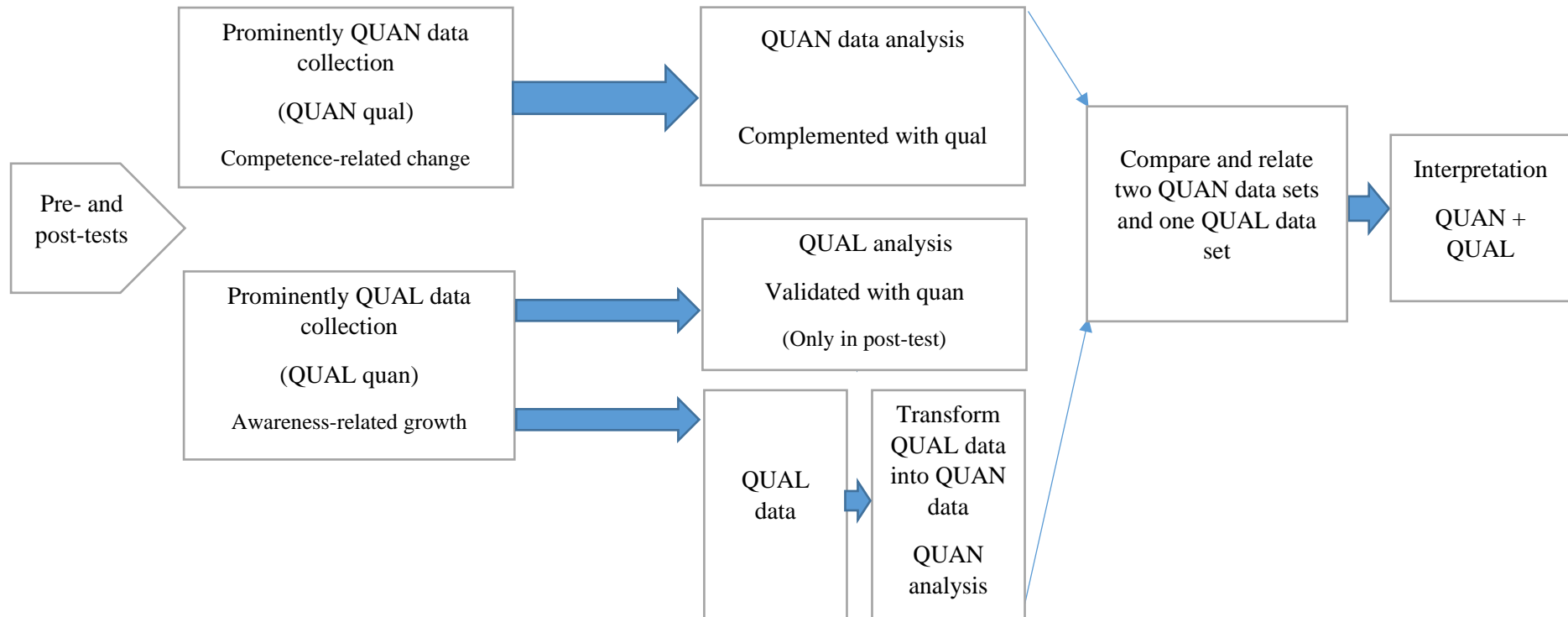
5.1.3 QUAN-QUAL triangulation design: a non-auxiliary role for the qualitative strand

The most common type of mixed research design in SLA and applied linguistics is triangulation or convergent design (Mackey and Gass, 2016). In the triangulation design, quantitative and qualitative data are given equal importance and are represented as QUAN-QUAL. I adopt a triangulation design here to gain a more complete and accurate understanding of the phenomenon under investigation: the development of pragmatic competence through exposure to prosodic pointing. Triangulation by convergence, data transformation and qualitative validation of quantitative data allows for greater confidence in results, because it yields a more complete picture of the phenomena observed (Bergman, 2008; Creswell, 2013; Creswell and Plano Clark, 2007, 2011, 2018). An example of this in the present study is the use of a quantitative test question together with a qualitative item asking the participant to explain their given answer. Although the qualitative justification is

quantified, it can give me further evidence of the respondents' improved accuracy. Another example is the scoring of qualitative answers, used to make statistical analysis possible. The convergence of qualitative research methods, i.e. introspection and behavioural items, together with quantitative research methods, i.e. test questions and inferential statistics, is expected to offer more robust evidence of the effectiveness or ineffectiveness of the intervention in enhancing Chinese L2 hearers' ostensive-inferential competence. From the qualitative data, I expect to gain a better understanding of why the intervention was or not effective. In that sense, access to qualitative data, may be useful in consolidating and further explaining quantitative results, exploring surprising quantitative results, and providing insights that can help in refining my hypothesis and associated theoretical assumptions (Creswell and Plano Clark, 2007). Despite its discovery-oriented nature, qualitative data may provide an additional verification making the overall results more reliable. Therefore, the triangulation design was selected as the most appropriate research design to test my hypothesis and address the theoretical implications outlined at the end of Chapter Four.

The intervention study uses a fixed mixed-methods design as the use of quantitative and qualitative methods was predetermined and planned at the start of the research process and the procedures were implemented as planned. According to Creswell and Plano Clark's categorisation of mixed designs (2007, 2011), decisions as to how and when to do the 'mixing' are affected by timing- and weighing-related factors. The present study, as we have just seen, justifies giving both quantitative and qualitative strands equal weight, represented as QUAN-QUAL. The timing-related factor has to do with whether the researcher makes use of each strand concurrently or sequentially. In the present study, quantitative and qualitative data are collected in parallel and analysed concurrently, for their analyses to be merged and integrated in the interpretation of results. There are four variants of the triangulation design and I make use of the first three to: compare and relate both data in the interpretation of results, transform qualitative data into quantitative data to make statistical inferences possible, and use qualitative findings to complement and/or consolidate quantitative results, as illustrated in Figure 2 on page 129. Both quantitative and qualitative data were collected concurrently and iteratively, analysed either separately or concurrently and then merged.

Figure 2 Concurrent triangulation research design model: the effect of the intervention



As Figure 2 suggests, the qualitative component does more than provide additional sources of information not provided by the quantitative source of data. In the present research, it contributes to the primary source of data and is there and visible throughout the intervention study. The qualitative component is by no means secondary, and although the present research is experimental, it gives an important role to qualitative research.

The interpretivist turn in L2 studies in particular shows that mixed methods research has contributed to promoting qualitative research in L2 learning and teaching studies (Hulstijn et al., 2014). This contradicts the argument often put forward against mixed methods. Purist qualitative methodologists have argued that the epistemological basis of the qualitative paradigm may be compromised through its integration into mixed research and close relationship with its quantitative counterpart, the reason given being that the quantitative stream tends to take on a dominant role in mixed research and have a resulting quantifying effect on the qualitative stream. However, evidence shows that qualitative research can serve a prominent and much broader role in mixed research (Creswell et al., 2006). Some have made a point of embracing the qualitative component of mixed research (Mason, 2002; Creswell et al., 2006). Like them, I see it as a major element in my intervention study. In the present research, the rationale and justification for using a mixed research design is to be found precisely in the benefits of using qualitative methods and gathering qualitative data, and I make a point of relying as much on the qualitative data as on the quantitative data. The present intervention study being a test study, the qualitative data obtained is all the more important, as it will allow me to gain deeper insights into what was effective or ineffective, why, and whether the intervention is appropriate for what is being assessed. It is expected that the mixed research data will shed light on the implications and relevance of the study for the targeted population.

As Figure 2 shows, I meshed the two strands of research so as to include the quantitative in the qualitative exploration and the qualitative in the quantitative measurement, having them evolve side by side in a way that is not just mixing but intertwining both strands from the start in the pre-test, throughout the intervention and to the end in both immediate and delayed post-test questionnaires. While the

concurrent triangulation research design frequently applies to single-phase studies, this study applies it to a fully longitudinal study.

5.2 A fully longitudinal mixed methods study

5.2.1 The centrality of time and process

Many if not all fundamental problems about L2 learning that SLA researchers investigate are in part problems about "time," (...) any claims about "learning" (or development, progress, improvement, change, gains, and so on) can be most meaningfully interpreted only within a full longitudinal perspective.

(Ortega and Iberri-Shea, 2005, p. 26)

The time and process elements are visibly present in the present study, and this longitudinal nature is determined by the research problem itself. The present research hypothesis reflects the testing of the effectiveness of an intervention. The effectiveness and workability of a pedagogical intervention can be best demonstrated in longitudinal evidence, as language learning is complex as a process and happens 'through and over time' (Ortega and Iberri-Shea, 2005, p. 26). Applied linguistics has seen a growing interest in longitudinal investigations of L2 instructional effectiveness (Ortega and Iberri-Shea, 2005; Dörnyei, 2007), which, in turn, has allowed researchers to ask more complex research questions and develop more sophisticated research methods. The research questions and aims call for a triangulation mixed method design within a longitudinal experimental study, the reasons for this being that, as with many SLA researchers conducting experimental intervention studies, what is being investigated has to do with time-related questions. More specifically, the time-related questions of the present study involve awareness-related growth and competence-related change and the relationship between the two. The investigation of the effects of the QUAN-QUAL intervention therefore operates at two levels. It investigates the effect of the intervention on: (1) the participants' awareness of prosodic pointing's pragmatic functions in cueing yes or no answers and (2) their increased ability to use in comprehension (and in production) prosodic pointing for its pragmatic functions in cueing yes or no answers. Not only did the longitudinal perspective allow me to map

change (competence) and growth (awareness) over and through time, but mixing methods allowed me to obtain a more in-depth understanding of the twofold effect of the intervention (Plano Clark et al., 2014). Their mixing in the analysis and/or interpretation stages intended to reveal whether and how these two levels converge.

This study uses a one-to-one correspondence, which means that the two data types are collected at each and every data collection point (Plano Clark et al., 2014). This is what makes it a fully longitudinal study (Van Ness et al., 2011). The two levels of inquiry used in determining the effectiveness of the intervention further justify the relevance and significance of using a mixed methods paradigm. As pointed out by Dörnyei (2007), because longitudinal research is traditionally and inherently concerned with both the micro- and macro-levels of development (i.e. awareness) and change (i.e. acquisition) respectively, its qualitative and quantitative traditions are complementary and their mixing in the form of a longitudinal research project that capitalises on their respective strengths is greatly encouraged. The idea of L2 learning happening through and over time (Ortega and Ibarra-Shea, 2005) should be reflected in L2 instruction research through the integration of ‘qualitative exploration of the processes and quantitative measurement of the outcomes’ (Hashemi, 2013, p. 207) in and throughout a single study. If one wants to draw a picture that more closely and completely depicts SLA processes and subsequently informs ISLA (VanPatten, 2017), one must investigate how learning happens ‘through’ and ‘over’ time to then investigate further the extent to which what happens over time is a consequence of what happens through time.

5.2.2 Fully longitudinal triangulation design: internal and external validity of the study

As well as being appropriate for the purposes of this research, the fully longitudinal triangulation research design improves the reliability of the study. A pre-/post-test design to measure the effect of a pedagogical intervention guarantees the validity of the post-test outcomes in terms of what it says about the intervention effectiveness. For the pre-test/post-test design to reflect reliably the effect of the intervention (i.e. the independent variable) on the participants’ pragmatic competence (i.e. the

dependent variable), the two versions of the test need to be comparable in form and difficulty. This equivalence between pre- and post-test questionnaires further enhance the internal validity of the results. Together with a pre-/post-test design, the results can be further validated by using a between-group design. A between-group design ensures that the test outcomes of the main group (i.e. the group that was exposed to the intervention under investigation) reflect what we believe they reflect, that is the effect of the intervention, as the only different variable between the groups – main and control – is the intervention itself. The administration of both pre- and post-test questionnaires to both main and control groups rules out the possibility that the control group may have been weaker from the start, in which case their lower test scores in the post-test questionnaire would not be meaningful.

More validity checks were run both internally and externally. Internal validity checks were used to ensure that no other variables other than the one that was being tested affected the results and that the differences that may have been found for the dependent variable relate to the independent variable. This included making the pre- and post-test questionnaires comparable and using a control group, and also ensuring that the participants were all speakers of the same first language, i.e. had the same language background and the same proficiency level and language learning experience (see inclusion criteria in section 5.3.2). Checking the external validity of the results concerns the sample itself, its representativeness and the generalisability of the results. Section 5.3.2 will explain how, in the present study, the setting for the experiment and the sampling ensured representativeness and generalisability of the results. By doing this, I ensured that the (internally valid) results of the study could be generalised to other Chinese L2 learners in a similar setting, and possibly to a broader audience of L2 learners. As in all L2 research studies, the individuality of the participants cannot be disregarded. And although variables were used and the research was designed so as to maximise the validity of the study, other variables may have interfered and impacted its results. This is, after all, representative of the learning realities found in the (language) classroom generally, and, again, this is where qualitative data plays its part in allowing the researcher to detect these potential other variables and acknowledge them.

5.3 The intervention study

5.3.1 Timeline and context for the study

In applied linguistics, it might be highly interesting to analyse the micro-processes that occur during, say, a 10-week language course.

(Dörnyei, 2007, pp. 81-89)

The present intervention study was conducted between July and September 2017, corresponding to the 12-week pre-sessional language course both main and control groups were taking while participating in the research. The data was collected over ten weeks and at five points including the pre- and immediate post-test data collection points and excluding the delayed post-test data collection in June 2018. A ten-week window allowed the students to have one week to settle in the UK and on the course, and one week for the researcher to introduce the project to them and collect the participants' consent forms. 15 participants were recruited in each group. Thus, the ten-week experiment included both the three-stage intervention and the administration of pre- and post-test questionnaires to both main and control groups. The current study is not what we would call a long-term investigation, but it is a fully longitudinal study which includes a pre-test and two, immediate and delayed post-test questionnaires, used to study both short- and longer-term effects of the intervention. The intervention period is still long enough to obtain satisfactory results while being realistic as regards time and institutional constraints and being relatively easily replicated in a similar context, as illustrated by the timeline provided on page 124.

There were great advantages of using the English summer course as a context and time frame for participant recruitment and data collection. Firstly, sampling was easy, since all students/participants already shared characteristics as a result of having been selected to undertake the summer course. Secondly, I had easy access to them for the entire length of the intervention. Thirdly, the students' completion of the summer course ensured their stay at the University of Surrey for a whole academic year and the possibility for me to re-administer the post-test questionnaire to the main group in June 2018 at the end of their academic stay. Finally, the ability to ensure that both

main and control groups were similar in all respects except for the variable assessed (i.e. the intervention) was another great advantage. However, as in all participant-based studies, there was no guarantee that the students would want to participate and give their consent, nor was there any guarantee that the participants would not drop out before the end of the experiment or between the immediate and delayed post-test administration. A further risk was that some of the participants would not successfully complete the summer course and therefore would not stay for the whole academic year. It would therefore not be possible to re-administer the post-test questionnaire to them in June 2018, nor would the delayed post-test results of those participants reflect the longer-term effects of the intervention after an academic year-long stay at a UK university.

5.3.2 Representativeness of the sample and generalisability

Another great advantage of using the summer pre-session English course as a setting and time frame for the present study is that it makes the sample representative and the study and results generalisable to a summer pre-session course setting. Most universities in the UK offer pre-session courses. These courses can vary in length from 5 to 12 weeks generally. The students enrolled on a 12-week course are expected to have a lower general level of English compared to those on the 5- or 8-week courses. Although pre-session courses are open to international and European students, we find that the great majority of them are Chinese and L1 speakers of Mandarin Chinese. Thus, the sample used in the present study was representative of a population: Chinese L2 learners, at pre-master's level with a total IELTS score between 5.5 and 6.5 and without any prior experience of living/studying in an English-speaking environment enrolled on a 12-week pre-session course at a UK university. Having a well-defined sample ensures its representativeness and the generalisability and the significance of the results. Incidentally, it also facilitates the replicability of the study. Having taught on pre-session courses since the summer of 2014, I could use my experience-based knowledge of the research population to further assess whether the sample was representative of it.

5.3.3 Longitudinal design and the small-scale intervention study

The present study is not a single-phase study. It is a fully longitudinal multiple phase study including three one-to-one sessions, a pre-test, immediate post-test and delayed post-test questionnaires, all entailing time and fine-grained analysis. It was therefore unlikely that a large pool of participants would be recruited. According to Fraenkel (2015), the minimum sample numbers in experimental studies within educational research are 15-30 participants per group. However, as Mackey and Gass (2016, p. 176) remind us, education research studies often utilize larger groups than L2 research studies. In L2 research, small groups are appropriate as long as the study is tightly controlled and the techniques for analysis take the numbers into consideration. In the present study, ensuring the presence of a control group was deemed more important than having more participants in the main group. Besides, 15-participant groups represent the standard class-size on summer pre-session courses, which makes further replication of the study realistic.

The rationale for the present small-scale study is further justified by its very purpose. The study is a test-study, aiming to assess the effectiveness of a method and refine its theoretical foundations, i.e. its research hypothesis and implications of the hypothesis, accordingly. Therefore, the validity-enhancing aspects of the research design, ensuring that the results reflect what we believe they reflect about the effectiveness of the intervention that is tested should be optimized. Validity of the results ensure that those results are meaningful and have significance not only for the population being tested (i.e. Chinese L2 learners), but possibly for a broader, relevant population (i.e. L2 learners). Finally, I adopted a practical approach in that I did what could be done in the context that I was given and maximised its strengths. In the present study, the time frame and context provided by the summer course constituted a real advantage for my access to the participants and for the representativeness of the sample. It also meant that the participants would be in a 'learning mode' and more likely to engage with their learning. At the same time, however, I was aware that recruiting participants that also were pre-session students at the time of the experiment could result in the participants feeling stressed, overworked and more likely to drop out from the research project. It was incumbent on me to be flexible and to make sure that participants' well-

being was considered at all stages of the research. This was helped by my familiarity with the programme which allowed the individual sessions and data collection points to be scheduled so that they would not be at the same time as the summer course's exams and project deadlines.

5.3.4 Participant recruitment: main and control groups

The present experimental study used both main (experimental) and control groups and involved selecting accessible samples representative of the researched population using a set of inclusion criteria which the participants would have to meet in order to represent this population and participate in the research. These inclusion criteria included being Mandarin L1 speakers, at master's level and with no experience of living and/or studying in an English-speaking environment. All participants also had an average IELTS score between 5.5 and 6.5. The inclusion criteria or variables and the resulting comparability of the participants have implications for statistical inferences. Having these inclusion criteria means that the participants all shared the same variables except for the independent variable or exposure to the intervention, which only the main group participants shared. As both the tutor and the researcher in the present study, I did not know and nor did I test the participants before the start of the summer course in June 2017. I did not know how many students and potential participants would meet the inclusion criteria nor how many students would provide their informed consent to participate in the study. All participants were part of the 2017 pre-session 12-week cohort at the University of Surrey and I had daily contact with all of them. However, the experimental group or main group participants were part of my main group of students, while the control group participants were part of my second group of students and had another 'home tutor', as each tutor teaches two groups of students: a home group and a second group. Participant assignment to either the main or the control group was organised based on practicality and ease. The main group participants could have been students from my second group, but since I had more contact hours with my home group, arranging individual sessions with them was easier.

Given the fact that I had more daily contact with my main students, they were potentially more likely to engage in the experiment and respond positively to the invitation, which was another reason for making my home students my experimental group. It could be argued that, because I had prolonged contact with the main group, it could potentially have influenced the participants' progress and their motivation to do well generally and in the individual sessions. However, as a listening and speaking tutor, my role was to deliver the same sessions and give the same input to both groups of students. This ensured that the two groups shared the same variables except for the independent variable or exposure to the intervention.

The conditions described show that, although inclusion criteria were used to ensure comparability of participants, no pre-testing of participants was conducted at the start of the course. The number of participants in each group was decided upon for representativeness reasons: each tutor group would generally consist of around 15 students, the majority of whom would generally be Chinese L1 speakers. The individual sessions involved up to 60-minute individual contact time with each of the main group participants at the end of teaching days and all the main group participants had to have their sessions around the same time (i.e. in weeks 3-4, 6-7 and 9-10) corresponding to the three data collection points. This shows that having more than 15 participants would have been difficult to manage in the course of ten weeks and in the context of a full-time intensive summer course. The experiment was designed into the course schedule. This meant that fitting a higher number of participants into the experiment schedule would have proved difficult. As explained in section 5.3.3, the importance of having a control group outweighed the need for more participants in the main group.

5.3.5 Control group and research design validity

The validity of the measured effect of the intervention was increased by using a between-group design. This includes the use of a control group in order to reinforce the validity of the main group's pre-test/post-test outcomes. In other words, to test whether the intervention as the independent variable has an effect on the dependent variable (i.e. pragmatic awareness and competence) and causes variation (i.e. higher

scores), we need to look at the pre-test/post-test outcomes of a group with no exposure to the intervention (i.e. the control group). This is expected to show whether the independent variable affected the dependent variable and whether the intervention was effective. The control group was administered the same pre-test/post-test questionnaires at the same time as the main group, that is before and after the intervention in July and in September 2017.

5.3.6 Ethical considerations

In May 2017, ethics approval was given by the College Research Ethics Committee for the College of Arts and Humanities at the University of Brighton, and a letter of support was provided by the University of Surrey.²¹ Ethical issues were identified and addressed as follows:

1. The participants were my then students, and therefore could be seen as ‘vulnerable’.

I was using my students to make the initial access and recruitment easier, and at the same time this made the recruitment as objective as possible as I did not know the participants until I met them at the start of the pre-session course on 20th June 2017. I did know that most of our students were Chinese L1 speakers, at master’s level and over 20 years old. The students could feel that they had to participate because they were my students and could therefore be seen as ‘vulnerable’. To address this issue, I made clear to them that whether they decided to take part in the study was entirely their choice, as stated in the participation information sheet. I was not asking them to take part but inviting them to. It would be possible for the participant to withdraw from the project at any time, which was also clearly stated on the participant information sheet and consent form. Withdrawal from the study would not affect the care they receive as students and it was made clear that their participation or non-participation in the project would not affect their completion of the pre-session course. These were two distinct matters. I ensured that the participants clearly differentiated between my role as a teacher and that of a researcher.

²¹ See Appendix Four for copies of the ethical approval letter and letter of support.

2. It was not likely but possible that the students felt overwhelmed by the time constraints their participation involved on top of the workload set by the language course.

As I am familiar with the pre-sessional course, I was able to arrange the sessions according to the assignment deadlines and workload set by the language course so as to prevent stress and fatigue. I listened to the participants and made every effort to be as accommodating as possible. The participants were able to rearrange their session at their convenience, but they were also expected to understand their responsibilities as participants.

3. The study involves prolonged and repetitive testing.

This issue is partly addressed above. The longitudinal nature of the study implies prolonged and repetitive testing of the participants. Participation took up 4 hours of the main participant's time from July to September 2017, and half an hour in June 2018. It took 1 hour of the control group participants' time between July and September 2017. Organising the intervention while the participants were enrolled on a three month-summer course, made continued access to the participants possible and the planning of the individual sessions relatively easy to handle.

Informed consent was sought prior to data collection. The research project was introduced to my then students, both orally and in writing. I allowed 40 minutes for them to read the Participation Information Sheet. I then went through it with them, invited questions, and ensured they understood clearly what would be expected from them should they decide to participate and what their rights as participants would be. I encouraged them to take the forms with them and have a thought, but they all returned their signed consent forms on the day I presented the project to them. I recruited 15 participants to form the main group and 15 participants to form the control group. However, one participant from the main group was absent in the last week of the course and could not complete the immediate post-test questionnaire. Consequently, I had 14 participants remaining in the main group and kept 14 out of the 15 post-test

questionnaires completed by the control group so that equal numbers of main and control participants remained. However, because the participant had completed the intervention, I retained their data in the analysis of the intervention in section 6.3.

The description of the methodologies will be carried out in two separate sections: 5.4 and 5.5. The first focuses on the data collection methods involved in the pre- and post-test assessments and used to test the effectiveness of the intervention (i.e. testing the research hypothesis). The second focuses on the data collection methods and integral stages of the relevance-based intervention itself (i.e. exploring the implications of the hypothesis).

5.4 Procedure for the study: the pre- and post-test questionnaires

The pre- and post-test questionnaires framed the experiment, as the pre-test questionnaire was administered before the start of the intervention and the immediate post-test questionnaire at the end of the intervention. The research hypothesis and theoretical implications addressed in the present study determined the type of questions asked in the pre- and post-test questionnaires. The effect of the intervention was measured in terms of both competence-related change and awareness-related growth, thus the questionnaires included both competence-related and awareness-related items²² (Dörnyei, 2003). These two levels of effectiveness are represented in the pre- and post-test questionnaires in the form of prominently quantitative and prominently qualitative items. For instance, the test questions that were used as quantitative data collection methods to test competence-related change included a qualitative component which was quantified for statistical analysis purposes. The qualitative questions that were used as qualitative data collection methods to explore awareness-related growth also included quantitative scale items to validate/consolidate qualitative results. Finally, a qualitative item used to test awareness-related growth was quantified for statistical purposes, in order to determine whether there was a significant change in the main group participants' awareness between pre- and post-tests and facilitate between-group comparison. Quantification

²² Following the literature on L2 research and questionnaire design, I will use the term 'item(s)' to refer to the questions/elements/activities present in the questionnaires.

and statistical analysis of this awareness-related qualitative item allowed me to determine whether the intervention could confidently be said to be the cause for the potential change in the main group participants' awareness, and finally, to investigate the relationship between awareness-related growth and competence-related change.

The first section will outline the prominently qualitative data collection methods, namely the qualitative items that were used to assess the effect of the intervention in terms of awareness-related growth in the main group.

5.4.1 Testing the short-term effects of the intervention on awareness

Two qualitative items were designed to test metapragmatic awareness and pragmatic awareness. These two items were present in the post-test-questionnaires.

Tell us what is true to you. I have seen my listening and speaking strategies change over the past months.

1. Not true of me
2. Somewhat true of me
3. True of me

If you answer 2-3, explain how: how have your listening and speaking strategies changed?

Rate your exposure to the target language in the past months. How often did you speak or listen to English outside the classroom?

1. Very frequently
2. Frequently
3. Occasionally
4. Rarely

Where and who did you speak English with?

These two qualitative items were intended to collect more insightful data on the participants' perceived change in their listening²³ and speaking strategies and exposure to the target language. The question concerning the participants' listening and speaking strategies was designed to generate textual evidence of the participants' metapragmatic awareness, that is evidence of the participants' ability to explicate the link between a prosodic and/or visual cue and its pragmatic function (e.g. 'I now pay more attention to stress to help me understand what the speaker means', 'I am starting to focus on louder words to understand when the speaker corrects information'), which in turn would provide evidence of the participants' pragmatic awareness, namely their orientation and alertness to paralinguistic cues to ostension as guiding cues to the speaker's intentions. At the same time, asking the participants about their strategies was intended to provide evidence of potential impact of the intervention on their listening and speaking strategies. If the strategies reported by the participants involved increased attention to specific cues (intonation and bodily actions) for pragmatic understanding as a hearer and possibly as a speaker, it would constitute evidence of an impact of the intervention on their metapragmatic and pragmatic awareness. It is believed that a potential change in the participants' listening and speaking strategies as L2 learners could impact on and have implications for the extent and nature of their exposure to the target language. As a result of having developed their strategies, the participants might be more inclined to look for opportunities to interact in their target language after the intervention. Thus, the data collected would potentially reflect raised pragmatic awareness in the main group participants as well as its direct consequence on L2 exposure. The qualitative questions were supplemented with scale items (i.e. represented as QUAL-*quan*) so as to obtain textual evidence of the potential effect of the intervention on the main group's awareness-related growth, on the one hand, and to obtain participants' rating of their perceived change in strategies and exposure to the target language on the other. The adding of a quantitative scale item was designed to help validate the qualitatively based comparison of themes identified in the main and control groups' responses to qualitative items. It was intended to facilitate a comparison between the main and control groups' awareness development

²³ Note here that the term 'listening' was used in the questionnaires for clarity. The participants were not familiar with the term 'interpreting' nor with the relevance-theoretic term 'hearing'.

and in turn shed light on the effect of the intervention on the main group participants' pragmatic awareness.

The QUAL-quan items were only present in the post-test questionnaires as they were seen as end-of-course types of questions. The two qualitative items were used as open questions expected to elicit enough textual evidence of both whether the participants' strategies have changed and how, and what the nature and extent of their exposure to the target language was. Their qualitative responses were analysed thematically, while the four-point and three-point scale items were used as quantitative data to (in)validate the qualitative results. I conducted inductive Thematic Analysis (TA), in order to identify and analyse patterns of meaning in the qualitative data and ensure the analysis is data-driven (Braun and Clarke, 2006). Using TA was appropriate since it works with large or small, real primary data sets. Prior to identifying and naming themes, I followed an active process, which ensured systematic and deep engagement with the data. This process involved reflexivity, data familiarisation, coding, theme development, revision, and naming of themes (Braun and Clarke, 2006). I started by reading and re-reading the data carefully to immerse myself in the data and identify meaningful text units which relate to the research, e.g. 'Have the participants' speaking/listening strategies changed, and what role the independent variable might have played?'. I then grouped together the text units which were telling a similar story in analytical categories and gave them provisional 'labels'. I then checked that the codes clearly evoked the data and developed themes, and when applicable, broke themes into sub-themes. The data was systematically reviewed, and the themes and sub-themes refined. For coherence and replicability purposes, a second researcher recoded the data using the same process. My experience of the summer course and the intervention meant that I could easily relate the participants' responses to the context(s) they had been in. My experience of the context also meant that I may have been influenced in identifying themes that I was expecting, or even looking for, despite conducting a personal reflexivity exercise prior to examining the data, i.e. reflection on my assumptions, experiences, and expectations, and how they may shape the way I read the data (Braun and Clarke, 2006). So, it was important that the data be analysed a second time by an external researcher. My PhD supervisor's thematic analysis and mine were merged and clearly corresponding results came out.

These QUAL-quan items were primarily used to provide more insightful textual evidence of raised pragmatic awareness in the main group participants, but the fact that they only appeared in the post-test questionnaire means that they cannot be reliably used to draw a parallel between raised awareness and enhanced competence in the main group participants. In order to more easily and reliably draw such a parallel, qualitative data needs to be quantified and statistically tested for significance. Thus, another qualitative, sentence-completion item included in both pre- and post-test questionnaires was used to assess the effect of the intervention on the main group participants' metapragmatic awareness and pragmatic awareness. The open-ended item present in both pre- and post-test questionnaires asked the participants to complete this sentence:

One role of intonation²⁴ in English is to _____.

This time the qualitative responses were attributed a score so as to make possible the use of the quantified data as a basis for statistical inferences. The score attributed to each response was based on whether the response was expected or not. This means that the answer was not necessarily wrong, since intonation in English can be used for a variety of different functions, but only those answers that reflected what the participants were tested for and the focus of the intervention were counted as correct or 'expected' and assigned a score of 1. To show evidence of metapragmatic awareness and pragmatic awareness, the participant was expected to describe intonation as that involved in prosodic pointing, namely contrastive stress, and explain the link between the use of contrastive stress and the speaker's meaning. This would demonstrate increased attention to contrastive stress as a highlighting device and indicator of relevance. The following illustrates expected and unexpected answers:

²⁴ The term 'intonation' was used for clarity. The participants would not have understood the term 'contrastive stress'.

Examples of expected answers: ‘to help me find important words’, ‘to listen and highlight point in the sentences’

Examples of unexpected answers: ‘to help me know the emotion of the other speaker’, ‘to speak more like a native speaker’

Quantifying the qualitative item enabled me to determine whether the main group participants’ post-test scores were significantly higher than their pre-test scores, and, if so, access to their qualitative responses could help me identify how much they reflected the effect of the intervention. Quantifying the qualitative item and the use of statistical evidence facilitated a between-group comparison, enabled me to determine whether the intervention could confidently be said to be the cause for the change in the main group participants’ awareness, and finally, allowed me to investigate the relationship between awareness and competence. Potential evidence of both metapragmatic awareness and pragmatic awareness would be an indicator of pragmatic competence, according to Ifantidou (2014) and my definition of ostensive-inferential competence. Investigating the short-term impact of the intervention on competence-related change will therefore help me further consolidate my hypothesis that exposure to the intervention will enhance the main participants’ pragmatic competence.

5.4.2 Testing the short-term effects of the intervention on competence

Four quantitative test items were used to measure the effect of the intervention on the main group participants’ pragmatic competence. The quantitative element involves a ‘greater uniformity of measurement and therefore greater reliability’ (Mackey and Gass, 2016, p. 102), especially when it comes to comparing pre- and post-test scores. For the test-retest element of the pre-test/post-test design to be reliable in terms of what it says about the intervention and its effect on the main participants’ performance, the two versions of the test need to be comparable in form and difficulty. Thus, the pre- and post-test questionnaires of the present study included both identical items and different items testing the same skill. They were administered to both groups of participants at two points in time, namely in weeks 2 and 11 of the summer course. To

more easily quantify the answers to the test items, which included quantitative and qualitative elements, and to use the data for statistical purposes, the qualitative part of the answer was quantified by being attributed a score. The following example of one of the test items illustrates the two quantitative and qualitative elements:

“My name is Bond. James Bond.” Underline the word(s) that carry an accent. Explain why.

Three of the four test items required the participant to underline the word(s) that were perceived or seen as stressed, i.e. words that would be expected to carry contrastive stress, and to provide a qualitative explanation for the chosen stress placement (i.e. the pragmatic justification for the stress placement) as the above example illustrates. These items were designed to get the participants to read the utterance and think of its likely intonation pattern based on their pragmatic understanding of it, pragmatic understanding which is tested through the qualitative justification for underlining the words they have underlined. These items were designed to assess their pragmatic competence as L2 hearers, namely their ability to attend to the speaker’s paralinguistic cue to ostension (i.e. contrastive stress) and use it to infer the speaker’s intended meaning. As part of testing pragmatic competence, the justification for the stress placement also reflected the participants’ metapragmatic awareness, that is their ability to link the cue to the right interpretation. Both the participants’ contrastive stress placement and their pragmatic justification for it were taken into account in the scoring of the data and both had to be correct for the answer to be attributed a score of 1. See below one example of an answer²⁵ which was attributed the score of 1.

“My name is Bond. James Bond.” Justification: James Bond, not Alex Bond. There might be a lot of Bonds.

The fourth test item was used to test the participants’ pragmatic understanding of a yes/no answer when contrastive stress is applied on a positively marked auxiliary verb

²⁵ The example answers provided are the participants’ exact answers and, as such, these may contain grammatical, spelling or punctuation errors.

form (i.e. ‘is’). It included both quantitative and qualitative elements as the following example illustrates.

Paul: Jane is not at home.

Marc: She is at home.

‘Is’ carries the accent. Explain why.

Which answer, A or B, could replace Marc’s answer?

A. Yes, you’re right.

B. No, you’re wrong.

Two of the four test items were intentionally kept identical in the pre- and post-test questionnaires for comparability concerns and for the purpose of better identifying participants’ enhanced accuracy both in stress placement and pragmatic interpretation. The administration of the same test items can raise validity concerns since it can be said that the experience of answering the questions in the pre-test questionnaire can influence the answers provided in the post-test ones. However, to gain insights into whether the participants’ accuracy had improved, the pre-tests and post-test questionnaires had to present identical items. Because of the nature of what the items test (i.e. the placement of contrastive stress on a particular constituent in an utterance and the understanding of its pragmatic implications), narrowing down the stress to one word rather than two or three words and providing a more precise interpretation would reflect better accuracy and therefore competence development. An example of an identical test item follows:

Underline the word(s) or number(s) that carry an accent in:

“Is the extension number 325?”

“No, it’s 345.”

Explain why.

The other two test items tested the same skill using different trigger-utterances. Contrastive stress was applied on a pronoun. Examples of different trigger-utterances follow:

Underline the word(s) that carry an accent in:

“You told me what Emilia wants, but what do you want?”

Explain why.

She pointed her finger at me and screamed:

“She did it.” Where does the accent go? Underline the word that carries the accent.

Explain why.

Although the data was scored, quantified and primarily used quantitatively for statistical purposes, access to the participants’ pragmatic interpretations together with their stress placement allowed me to identify participants’ enhanced accuracy both in stress placement and pragmatic interpretation and to validate quantitative results. It allowed me to draw a more accurate picture of the impact of the intervention on the participants’ pragmatic competence in terms of the nature of the potential enhancement of their competence.

The four quantitative test items were included in both pre- and post-test questionnaires and were completed by both main and control groups. These were scored and analysed statistically to determine whether the main participants’ post-test scores were significantly different from their pre-test scores. The impact of the intervention on the main group’s pragmatic competence would be demonstrated by both evidence of a statistically significant difference between the main group participants’ pre- and post-test scores and a lack of evidence of a statistically significant difference between the control group participants’ pre- and post-test scores.

5.4.3 Testing the longer-term effects of the intervention on awareness and competence

The delayed post-test questionnaire was administered to the main group participants in the summer of 2018. Its format and content were almost identical to those of the immediate post-test questionnaire. The four quantitative test items and the qualitative sentence-completion item concerning the role of intonation were identical. The qualitative items investigating the participants’ strategies and exposure to the target

language were almost identical; they needed updating as their strategies and exposure were no longer assessed over the past months but over the past *year*, as illustrated below:

Tell us what is true to you. I have seen my listening and speaking strategies change over the past year.

1. Not true of me
2. Somewhat true of me
3. True of me

If you answer 2-3, explain how: how have your listening and/or speaking strategies changed?

Rate your exposure to the target language in the past year. How often did you speak or listen to English outside the classroom?

1. Very frequently
2. Frequently
3. Occasionally
4. Rarely

Where and who did you speak English with?

A series of questions relating to the intervention itself and how it might have helped them improve their listening and speaking skills were added.

Do you remember that you participated in an experiment during PS12 last summer?

What was the experiment about? What was the purpose of the experiment?

What did you have to do?

Do you think that this experiment helped you in any way during your time in the UK?

During the academic year?

Do you think it has helped you improve your listening skills? Speaking skills? If so, how?

The delayed post-test questionnaire was designed to assess whether the intervention had helped participants to develop pragmatic behaviour as L2 hearers on the longer term. The delayed post-test questionnaire assessed the durability of effects, that is, whether the effects of the intervention were still visible after a prolonged period of time. Since a prolonged period of time assumes a prolonged period of immersion in the UK and – rightly or wrongly – prolonged and repeated exposure to the target language, the delayed post-test also investigated whether the intervention had more than lasting effects and whether the participants’ competence was found to have further improved. In other words, analysing the delayed post-test results involved determining (1) whether the difference between the pre-test and delayed post-test scores was still significant and (2) whether the delayed post-test scores were higher than the immediate post-test ones. The reason is that, as part of promoting a ‘learning to listen, listening to learn’ approach, the intervention sought to develop the participants’ pragmatic behaviour as an L2 hearer so that they gain more out of their exposure to the target language and further develop their comprehension and production through it. The ‘learning to listen, listening to learn’ approach is particularly aimed at enhancing participants’ epistemic vigilance. Learning to be pragmatically competent as an L2 hearer involves more than learning comprehension. It involves learning to evaluate one’s comprehension in relation to and on the basis of the speaker’s ostensive behaviour. Evaluation of comprehension is developed through and over time, through prolonged immersion and repeated exposure to the target language with opportunities for one’s interpretations to be challenged and critically reassessed. The delayed post-test results were intended to help me determine whether the participants had ‘listened to learn’ and further enhanced their pragmatic competence. Although this approach uses the term ‘listen’, it involves more than listening as discussed in Chapter One. ‘Learning to listen’ reflects the idea that listening activities are to be understood as mind-reading activities involving multimodal input processing. Subsequently, ‘listening to learn’ entails that increased attention to the speaker’s ostensive paralinguistic behaviours will allow the L2 hearer to further adjust his epistemic vigilance in the target language and thereby further enhance his pragmatic competence. This is assuming that the L2 hearer receives sufficient input.

The 'learning to listen, listening to learn' approach adopted in the thesis should not be confused with Vandergrift's argument that 'students need to "learn to listen", so that they can better "listen to learn."' (2012, p. 3). My approach applies to the ongoing development of epistemic vigilance in the L2 hearer and does not involve two different cognitive processes as is the case with Vandergrift's model. According to the approach used in the thesis, the comprehension procedure learned through the intervention (i.e. the 'learning to listen' phase of the approach) is meant to be repeated and to lead to the fine-tuning of the L2 hearer's epistemic vigilance through post-intervention development (i.e. the 'listening to learn' phase of the approach).

The methodologies that have been described served to investigate whether the main group participants' pragmatic awareness and competence were enhanced, and whether the intervention was effective in the short and longer term. The mixed methodologies of the intervention itself (i.e. the instruction being tested), which the next section will present, were designed in such a way as to enhance the participants' pragmatic awareness and competence. What this means according to the definition of pragmatic competence that the present work adopts is that the intervention was thought out to enhance the participants' detection and use of the speaker's ostensive behaviour (i.e. attentional and inferential processes) necessary for L2 epistemic vigilance development (i.e. the hearer's critical assessment of one's own interpretation throughout the interpretive process).

5.5 Procedure for the study: the intervention

The methodologies designed as part of the intervention itself serve several purposes. They test a method of instruction aimed at enhancing pragmatic competence in Chinese L2 hearers. They test the theoretical foundations of the method of instruction and further assess the main hypothesis. Finally, and as a consequence, they enable me to refine/validate the main hypothesis and to address the theoretical implications of the hypothesis.

5.5.1 Three stages

The intervention comprised three one-to-one sessions with a time interval of three weeks with each main group participant. The three stages were made of two interpretation-oriented sessions (stages 1 and 2) followed by one production-oriented session (stage 3). The reasons behind the two interpretation-oriented sessions and the production-oriented one were theoretically motivated. As explained in the theoretical chapters, the instruction methods being tested sought to develop pragmatic behaviour in Chinese L2 hearers adopting a relevance-theoretical approach. Therefore, the intervention focused on the hearer's behaviour not as opposed to but in relation to the speaker's behaviour: the hearer's interpretative and inferential work is developed in relation to the speaker's ostensive behaviour. It was important for the instruction to reflect the idea that developing competence as a hearer also impact the learner's behaviour as a speaker. The first two stages therefore focused on assessing the main participants' competence as hearers, while the third stage assessed their competence as speakers. It was assumed that the intervention outcomes would reveal whether the participants had come to understand their role as L2 hearers in relation to the speakers' ostensive behaviour and whether the relevance-based intervention had been effective. While stage 3 was a part of the method tested, I will focus on analysing and reporting the results yielded at stages 1 and 2, as stages 1 and 2 tested metapragmatic awareness, pragmatic awareness and pragmatic competence as an L2 hearer, and their results bear on the research hypothesis and theoretical implications I have set myself to address.

5.5.2 Stages 1 and 2

As part of the input-and-recall sessions, the participants were exposed to a dialogue. At stage 1, the participants listened to the audio version of the dialogue, while at stage 2, they watched the video version of the dialogue. Stage 1 involved access to contrastive stress, which means that it focused on assessing the participant's detection and use of contrastive stress within a meaning-oriented task, while stage 2 involved access to prosodic pointing, which means that it focused on assessing the participant's detection and use of prosodic pointing within the same meaning-oriented task. The individual sessions at stages 1 and 2 were used specifically for the purpose of testing

the role of prosodic pointing in fostering epistemic vigilance in Chinese L2 hearers. Sessions 1 and 2 were also used to potentially further validate the hypothesis that it is exposure to prosodic pointing that causes the participants' pragmatic competence to vary positively. While measuring the impact of the intervention may reveal that the intervention has had a positive impact on Chinese L2 learners' development of pragmatic competence as hearers, it does not investigate what component of the methodology and instruction triggered this positive effect, nor does it show the extent to which exposure to prosodic pointing has contributed to the results. The difference between stage 1 and stage 2 serves yet another purpose: that of testing prosodic pointing as an inclusive concept and, at the same time, the strength of the argument for refining the prosody-pragmatics interface. It is predicted that access to prosodic pointing would give participants access to richer input and an opportunity to challenge their initial interpretations in working their way towards the speaker's intentions. To test the assumption that having access to prosodic and visual pointing modalities, compared to having access to prosody alone, would be more beneficial in enhancing the participants' ostensive-inferential competence, the participants' comprehension was tested under each condition at stage 1 and at stage 2.

The dialogue was played twice both at stage 1 and stage 2. At stages 1 and 2, the participants were asked comprehension questions related to the three samples marked in bold in the dialogue and presented below on page 155. The participant was asked: (1) to answer a comprehension question (i.e. testing pragmatic understanding of a yes/no answer), and (2) to explain why or how they knew, as a means of eliciting explication of the link between noticed ostensive cues (e.g. stress patterns, facial expressions, head movements, gestures) and pragmatic interpretation of Speaker B's intended meaning. As suggested in Chapter Four, meaning is used a cue to language, and much of that meaning is conveyed by non-verbal cues. The participants' performance at both stages was expected to reflect their alertness to paralinguistic cues to ostension and their ability to retrieve an optimally relevant interpretation using the cues. This corresponds to their pragmatic awareness. At the same time, the two sessions were testing their ability to link specific cues to specific intentions and explicitly say which cues guided them to which interpretation. This corresponds to their metapragmatic awareness.

Sample 1

Speaker A: Shame John wasn't at the party.

Speaker B: He \ was at the party. Didn't you see him?

Description of visual input and intended interpretation: Speaker B frowns and looks surprised. He disagrees with Speaker A.

Questions asked: Was John at the party? Why? How do you know?

Sample 2

Speaker A: Is she trying to lose weight?

Speaker B: She √ was.

Description of visual input and intended interpretation: Speaker B maintains eye contact with Speaker A, his face shows that this is not the whole story. The use of a fall-rise ('She √ was') also indicates that Speaker B's answer means more than 'she is no longer trying'.

Questions asked: Is Speaker B's answer yes or no? How do you know?

Sample 3

Speaker A: Jay wasn't there then?

Speaker B: \ He wasn't | \ No.

Description of visual input and intended interpretation: Speaker B shakes his head as a sign of agreement. His face agrees. Speaker B agrees with Speaker A.

Questions asked: Is Speaker B's answer yes or no? How do you know?

All three samples presented contradiction between their linguistic form (positive or negative) and the visual cues available at stage 2. They also all involved prosodic emphasis on a verb form, which, I suggest, can help participants to work out how the visual input is to be interpreted. What I hoped to find using these three samples was evidence that, at stage 2, the participants can see that there is more to Speaker B's meaning than what the linguistic input alone suggests, and that access to all paralinguistic cues (i.e. prosodic information, frowns, disagreeing face, maintained eye contact) can help them to go from a wrong or relevant enough interpretation at stage 1 to the optimally relevant or intended interpretation at stage 2. For example, the

past tense in ‘She \ / was’ may be seen as sufficient information to infer that ‘she’ is no longer trying to lose weight. This, however, is not the optimally relevant interpretation; it is a relevant enough interpretation. Speaker B’s prosodic and visual cues show that what Speaker B intends to communicate is that ‘she’ gave up, that there have been complications or that he is not supposed to tell. There is not a definite interpretation of Speaker B’s answer in sample 2, and the interpretation the hearer reaches may go beyond the speaker’s intended meaning. My intention, however, was for the participants to suggest one possible interpretation based on their use of Speaker B’s paralinguistic cues and understand that there is more to Speaker B’s meaning than what he says.

As the questions show, the testing of the participants’ comprehension did not only generate quantitative answers. It also generated qualitative insights believed to provide me with access to the participant’s unobservable interpretive processes. This qualitative component is crucial as I intended to explore the participant’s attentional and inferential processes and find evidence of developing epistemic vigilance. In accordance with a triangulation design, comprehension test results (i.e. quantitative data) and the participants’ self-reported interpretation-related thoughts (i.e. qualitative data) provided in immediate recall interviews were collected concurrently both at stage 1 and at stage 2. The amount and nature of interpretive reasoning reported by participants at stages 1 and 2 were believed to show whether access and exposure to paralinguistic cues, as opposed to prosodic ones only, engaged them in more sophisticated interpretive activities involving inferences of speakers’ intentions, and whether increased attention to ostensive paralinguistic cues enhanced their ability to use them in the inferential work. Thus, in the present research, the participant’s interpretive journey reflected in the qualitative data was equally, possibly even more, important than their (mis)understanding reflected in the quantitative data, and both were needed to assess the effectiveness of instruction and reliability of the proposed intervention.

Another reason why collecting qualitative data was crucial is that the conclusion that the participant arrive at (i.e. their answers to the comprehension questions) may or may not reflect the reasoning process they have gone through and the quality of the

participants' answers to the comprehension questions is only reliable to a certain extent. I will find that answers to comprehension questions do not always accurately reflect the participant's understanding of the speaker's intentions, nor their interpretive journey to the conclusion. They may for instance understand that 'John was at the party' without going as far as inferring that Speaker B intends to disagree. The qualitative explanation constitutes an important source of information which can tell me more about the participant's actual understanding and how they have reached their conclusion. The comprehension questions nonetheless remain important as they serve the purpose of providing a meaning-oriented context for the task and for the participants' interpretative thoughts to emerge.

As the same dialogue was used at both stages, it could be argued that having heard the dialogue once and having had to recall elements of it when answering comprehension questions at stage 1 could have influenced the participants' performance at stage 2. However, as the results will show, access to richer input and more cues to attend to and use in the interpretive process did not always translate into higher performance in terms of comprehension. It may instead have translated into more reasoning as it was likely to require the participants to reassess their interpretative judgments. This is precisely what epistemic vigilance involves, and evidence of this happening would therefore be seen as a positive result. The purpose of exposing the participants to both stages 1 and 2 and to two different experiences of the same dialogue was also to provoke awareness. These two experiences were expected to make them realise how much of a difference restricted access to multimodal cues makes to their ability to read speaker cues to her intentions. It was expected that participants comment on their experience of the difference between stage 1 and stage 2 modes of exposure. It may also, as the next tasks show, demonstrate how much being aware of this new source of meaning may affect their behaviour as L2 hearers: knowing that these cues are there to be picked out by the hearer's attention and to pave their way towards understanding the speaker's intended meaning, they may understand that 'listening' is as much an activity for the eyes as it is one for the ears.

5.5.3 Rationale for using immediate recall

Introspective methods were originally introduced as a method of scientific inquiry in psychology, then later in cognitive psychology and philosophy. It can be defined as the ‘various ways of eliciting self-reflections from respondents’ (Dörnyei, 2007, p. 147). Both think-aloud protocols and retrospective interviews can be considered as introspective methods. The retrospective interview method, which the present study utilized, is also commonly referred to as recall. The assumption underlying introspective methods is that participants can have conscious access to their inner thought processes. The role of the researcher is then to guide them in exploring and self-reporting those ‘there and then’ thoughts often by using a stimulus as support for the recall – hence the use of the term ‘stimulated recall’ (Dörnyei, 2007). However, not all recall protocols utilize a stimulus. In the present study, the recall procedure did not require a stimulus as the recall was immediate.

It is recommended to use recall of directly retrievable information and asking questions addressing directly accessible information (Dörnyei, 2007). For example, asking participants how they know that Speaker B agrees or disagrees, or whether John was at the party, is expected to trigger their recall of Speaker B’s directly accessible and retrieval communicative cues. Using their L2 to report on their perceptual processes can be challenging for the participants and it can limit the amount and quality of the reported data. In fact, it is encouraged, where possible, to resort to their L1. In the present study, English is the only shared language between me and the participants. Nevertheless, most questions related to directly retrievable memories of the participant’s perception of an element of an utterance as stressed and their understanding of the speakers’ meaning in relation to the stressed element, so using the language that the recording was played in (i.e. the target language) made more sense. One reason to favour immediate recall over think-aloud protocol is that, while think-aloud protocol requires and involves training, with recalls simple instructions are often enough (Dörnyei, 2007). Under recall methods, a further distinction is drawn between consecutive recall, delayed recall and non-recent recall (Mackey and Gass, 2000). That distinction is one of timing or what Mackey and Gass (2016, p. 88) call ‘temporal relation to action’ referring to the ‘length of the time period that elapses

between the event and the recall', and this should be as short as possible (Dörnyei, 2007). The event here is the playing of the audio- and video-recording. The comprehension question and accompanying perception-related question were asked at the end of each line, which I played twice. Ericsson and Simon (1987, pp. 40-41) argue that 'reports on the immediately preceding cognitive activity give us the closest approximation to the actual memory structures.' Recency of the action to be recalled ensures that the participant has easy access to the recall focus and that the researcher has easy access to their memory structures. Consequently, recency of the action to be recalled also ensures stronger validity of the collected data and of the claims advanced.

5.5.4 Stage 2: multimodality and the physicality of prosodic pointing

While stages 1 and 2 were similar in many ways, they fulfilled different roles in the overall progression of the intervention. Stage 2 was distinctly more oriented towards the participant's experience of the physical dimension of prosodic pointing, its pointing function and how it is used to realise pragmatic functions. Stage 2 was therefore more focused on raising the participant's awareness of how contrastive stress naturally and typically interacts with and activates finger pointing, facial modification, head movement and so on. At the end of the stage 2 recall activity, I focused the participant's attention on the last line of the dialogue to make them notice the importance of head movement in producing contrastive stress. The participant was asked to utter the line: 'No, it is \ 201, \ James street' while staying as still as possible. They were then asked to do the same but, this time, while being able to move. The activity was designed so that the participant would experience how producing contrastive stress on '2' and 'James' naturally activates a forward movement of the head and that producing contrastive stress turns out to be difficult when remaining still. It was hoped that this would show them how much of the body is involved in the production of contrastive stress, and, again, the importance of studying it as a multimodal phenomenon: prosodic pointing.

Stage 2 also involved a post-recall activity, focused on raising participants' awareness of the pointing function of prosody as found in prosodic pointing, i.e. contrastive stress. This post-recall activity was divided into two tasks. As part of the first task, I

had placed five of the Guess Who board-game cards with each card showing one cartoon character and their first name. Each character has distinct features such as a hat, glasses, a beard and/or a moustache, blond, dark, or red hair. The participant was asked to identify for example who wears glasses by not using the character's name, as illustrated below.

The researcher: Who wears glasses?

Hypothetical answer from participant: The girl with yellow hair.

Intended response: \ She does. The \ girl does. (*Given that there is only one female character*).

However, the participant was not expected to rely on contrastive stress nor to use auxiliary verb forms naturally. They were expected instead to rely more heavily on using words to describe the character as shown in the hypothetical answer. It is then the participant's turn to ask the question:

The participant: Who wears glasses?

The researcher: \ She does. *I used contrastive stress alone as there is only one female character.*

The participant asks the question again once another female character has been added to the five current ones.

The participant: Who wears glasses?

The researcher: \ She does. *This time, I used prosodic pointing (i.e. I point to the female character with glasses, using contrastive stress, digital and chin pointing)*

The participant was then asked the same question again, for me to see whether they would correct their answer based on the received input. It is important to note here that I did not explicitly correct the participant. Instead, I answered differently relying heavily on paralinguistic form rather than solely on linguistic form. It is this difference in form that may be what makes the input salient to the participant. My feedback intended to show that while relying on linguistic form to answer the question is not wrong, prosodic pointing may be more effective and more typically used in English.

The second activity was focused on one Guess Who character: Eric (Jaume, 2017).



This time, the activity involved a scripted exchange between the participant/speaker 1 and me/speaker 2 as illustrated below.

Speaker 1: Has Eric got a hat on?

Speaker 2: He has.

Speaker 1: Eric hasn't got a hat on.

Speaker 2: He has. (*With a nod and a frown*)

The participant was then asked to explain the difference between speaker 2's two different answers. This task was designed to assess whether having direct access to the speaker's ostensive cues made the participant more likely to interpret her intentions.

To gain insights into whether stage 2 recall and post-recall activities had the desired effect on the participants' awareness, namely an enhancement of their awareness of how intonation and gesture are to be used and read together as evidence of the speaker's ostensive behaviour and cues to his communicative intentions, further data was collected at the end of stage 2. The participants were asked to summarise what they understood stage 2 was about and what they had learned at stage 2 based on both stages 1 and 2. The qualitative responses offered by the participants are expected to indicate whether stage 2 recall and post-recall activities were effective in raising the participants' awareness of the physicality and pragmatic function of prosodic pointing.

The responses may also show the participants' understanding of how central listening for and paying attention to multimodal cues is to one's understanding of speaker intentions.

5.5.5 Stage 2 rationale: noticing the gap and preventing interlanguage fossilisation

The rationale for the two post-recall activities was that they could provoke awareness and make the participant consciously *notice the gap* between their answer and the received input. According to Schmidt's Noticing Hypothesis (1990), learners noticing the gap between the output they are able to generate (i.e. their present competence or interlanguage) and the received input would facilitate their noticing of the gap between their interlanguage and the target language, and thereby foster conversion of input into intake. In the context of the present experiment, the nature of the input itself, namely multimodal pointing or ostensive communicative behaviours makes it salient. The fact that the mode(s) of communication in the input may be quite radically different from those the participant would instinctively rely on and from the sort of features that the participants would otherwise pay attention to may make the input salient to them and more likely to become intake.

Noticing the gap between the modalities used in the input (i.e. paralinguistic form) and those generally used by the participant (i.e. linguistic form) is also expected to make the participants notice the gap between what is possible in Chinese and what is possible in English. For instance, having their attention focused on reading bodily actions as ostensive cues to the speaker's intentions can make them realise that while non-verbal cues are central to communication in English, they play a less important or different role in Chinese. The participant may also understand that what works in Chinese is not translatable into English. For example, they may realise that it is possible to utter 'Yes, he has' and nod to express disagreement in English, while 'yes' and a nod can only mean agreement in Chinese. Finally, the participants may notice a gap between the type of instruction they have been exposed to in their home country and the type of instruction and focus that the present instruction is testing. What the post-recall activities assume is that all these opportunities to notice the gap(s) can not

only provoke awareness in the participants but, in doing so, also work towards preventing the participants' interlanguage fossilisation and allow the participants to move away from L1-based concepts of knowledge that interfere with and impede on the development of their interlanguage and cause L2 pragmatic fossilisation to happen.

5.5.6 Stage 2 rationale: relevance and the Noticing-as-Ostensive (NaO) model

Stage 2 was designed to help me determine whether access to the speaker's ostensive behaviour and enriched input helped Chinese L2 hearers in focusing on and interpreting the speaker's/their interlocutor's intentions. Answering this question will not only enable me to draw conclusions as to the relevance of relevance theory and of the Noticing-as-Ostensive (NaO) model to instructed L2 pragmatics acquisition studies focusing on developing interpretive competence, but it will also indicate whether combining relevance-based intervention with exposure to prosodic pointing is efficient in raising pragmatic awareness and enhancing pragmatic competence in L2 hearers. According to the relevance-based definition of pragmatic competence as an L2 hearer, the hearer's behaviour intrinsically relates to the speaker's behaviour. The instruction under study promotes the hearer's awareness of the balance between the role of the hearer and that of the speaker, between the hearer's inferential work and the speaker's ostensive behaviour. Raised awareness of one's role as a hearer in relation to that of the speaker, and a marked orientation towards the speaker's ostensive behaviour intends to encourage participants to think in terms of speaker communicative intentions and read their interlocutor's cues.

Thus, stage 2 post-recall activities involved the participants being directly exposed to prosodic pointing and taking on the role of the speaker as well as that of the hearer. Direct exposure to prosodic pointing ensured that the participant was engaged in the interaction as one of the interlocutors and as the intended recipient of the speaker's ostensive cues. Although ostensive stimuli can be read and interpreted as ostensive by someone witnessing or overhearing a conversation, it may be that, in the context of developing ostensive-inferential competence in the target language, the participant's access to stimuli that is intended for him will facilitate his use and interpretation of the cues. Stage 2 post-recall activities thereby investigated whether being the direct

recipient of the ostensive cues may help the L2 hearer engage as the interpreters of these cues.

The purpose of fostering a more active competence in Chinese L2 hearers was also served by the listening journal and stage 3 of the intervention. However, although both the listening journal and stage 3 of the intervention were part of the intervention and used to further raise participants' awareness and nurture the impact of stage 2, they were not used as data collection points. Nevertheless, they are equally important in assessing the effect of the intervention, as, if the impact of the intervention is shown, then the intervention as a whole is then shown to have been effective.

5.5.7 The listening journal

Between stage 2 and stage 3 of the intervention, the participants were asked to keep a listening journal in which they would record instances of prosodic pointing. This activity implied that they go 'out there' and listen more consciously for prosodic and other non-verbal cues. The purpose of having them keep a listening journal was to help in nurturing their newly developed orientation to prosodic and gestural ostensive behaviour and optimize the awareness-raising impact of stage 2 of the intervention. Having to record instances of speech entailed that they take what they have learned outside the research-room and work out for themselves how relevant it is to them, enjoy a more conscious experience of listening activities and possibly initiate more communicative exchanges. The listening journal was not a data collection point; it was simply part of the relevance-based intervention under assessment. As such, its purpose was to create the opportunity for participants to engage in verbal (and non-verbal) exchanges and further develop their behaviour as L2 hearers in relation to that of L2 speakers through active listening. The listening journal can also work as an extension of stage 2 in that it can make participants realise the importance of what they are learning, and its significance for their communication ability and interlanguage development. The participants were then asked to bring their journals to stage 3 individual session, to go over its content, recall and describe the recorded instances to me. Setting up a listening journal also aimed to encourage participants to gain more exposure and more from their exposure to the target language. As an integral part of

the intervention, the listening journal also worked as a transition between stages 1 and 2 being mainly interpretation-oriented and stage 3 being production-oriented.

5.5.8 The production-oriented task (stage 3)

The third individual session (stage 3) included a pre-task which required participants to produce contrastive stress. The participant and I had a (different) extension number written on a piece of paper and pretended to be over the phone checking the correctness of the number.

I asked: So, the extension number is 12453?

To what the participant had to answer: No, it's 124 \ 63. *As we were supposed to be speaking over the phone, the use of contrastive stress alone was necessary to correct the number.*

The main task of the third individual session was inspired by the French talking game 'ni oui ni non', in which players have to answer (yes/no) questions using 'neither yes nor no'. To prepare for this task, I had asked weeks before the third individual session the students to provide information about their age, their parents' jobs, their siblings, their pet(s), their favourite colour and their favourite food. The collected information then allowed me to prepare questions asking for confirmation of the correctness of the information. I had intentionally changed the information so that the participants would have to correct it. The researcher-participant exchange is illustrated below:

I asked: So, your mother is a teacher?

To what the participant answered: No, my \ father is a teacher. My mother is a \ doctor.

Instructional scaffolding was used to orient the learner towards using the target form (Skehan, 2002), as in the following:

Instruction 1: answer question / by (dis)confirming presupposition

Instruction 2: do not say yes/no

The participants were expected to answer negatively by using ‘no’, and instructional scaffolding was thought out to help in ensuring that they resort to prosodic pointing, namely contrastive stress coupled with a forward movement of the head and possible modification of the eyebrow (e.g. rise or frown).

The participants then selected one of their answers and recorded it using the speech analysis programme *Praat* for its acoustic descriptions of key segments of speech. It enabled them to visually realize the acoustic effects of using contrastive stress and hear their own use of intonation for meaning.

5.6 Conclusion

Chapter Five has presented and supported the methodological choices that lie behind the intervention. I have outlined my rationale for using a longitudinal concurrent triangulation research design, presented both my experimental and control group participants, and highlighted how the ethical considerations were addressed. I have also introduced the mixed methods of the pre- and post-test intervention used to test the hypothesis.

Chapter Six

Data analysis and research findings

6.0 Introduction

This chapter presents the analysis and interpretation of the results in four separate sections. The first two sections reflect the pre-/post-test between-group design of the study. They follow strictly the concurrent triangulation research design model provided in Chapter Five (see Figure 2 in section 5.1.3) and present the short-term effectiveness of the intervention on the main participants' pragmatic awareness in section 6.1 and pragmatic competence in section 6.2. According to Ifantidou (2014) and my definition of pragmatic competence, pragmatic awareness is an indication of pragmatic competence. I therefore present the impact of the intervention on awareness-related growth first, before presenting the impact of the intervention on competence-related change, as the latter should follow the former. Sections 6.1 and 6.2 test the research hypothesis and offer general conclusions. Section 6.3 looks at the intervention itself and investigates the nature of its impact on the main participants' awareness and competence. This section contributes to addressing the five theoretical assumptions highlighted at the end of Chapter Four. These assumptions are implications of the hypothesis and, as such, depend greatly on the testing of the hypothesis. Therefore, the outcome of the intervention will either validate or invalidate the hypothesis, while providing directions for exploring the assumptions that emerged from the hypothesis. Finally, the longer-term effects of the intervention on the main participants' pragmatic competence are assessed in section 6.4.

6.1 Impact of the intervention on awareness-related growth

According to the concurrent triangulation research design model illustrated in section 5.1.3 on page 129, quantitative and qualitative methods are meshed. It follows from this that the analysis and interpretation of results reflect the research design by

presenting both quantitative and qualitative results concurrently, thereby following the model.

6.1.1 The main group's development of strategies

The post-test questionnaires contained both qualitative open-ended items and quantitative scale items, all integrated in the interpretation of results pertaining to the impact of the intervention on the main group's awareness-related growth. The assumption being put to the test is that competence-related change presupposes awareness-related growth. It is therefore assumed that the main group's awareness would have developed alongside their competence. This section of the analysis relies primarily on the main group's qualitative responses to an item asking them about the development of their strategies as hearers and speakers over the course of the summer of 2017. Results of these responses were then complemented with the participants' responses to scale items for validity checking purposes.

Thematic Analysis revealed four major themes in the main group's qualitative responses to the question 'How have your listening and speaking strategies changed over the past months?':

Theme 1:	orientation to others' and one's prosodic or non-verbal behaviour
Theme 2:	reporting on change in strategies
Theme 3:	reflecting both their changed behaviour as a hearer and as a speaker
Theme 4:	providing pragmatic reasons for using and paying attention to prosody and body-language

The four themes were integrated into a narrative passage, i.e. a discussion of the themes that emerged from the qualitative data based on short quotes of main group participants:²⁶

²⁶ Chapters Six and Seven include quotations from the participants. They may therefore contain grammatical errors.

Orientation to others' and one's prosodic and/or other non-verbal behaviour is reflected in the participants' use of the verbs 'pay attention to', 'listen for', 'focus on' and words referring to prosodic pointing: 'the words that are stressed', 'intonation', 'intonation and body-language', 'facial and voice changes'. A change in orientation which involves refocusing of attention is reflected in the respondents' words: 'pay more attention', 'pay attention now compared to before I paid none', 'focus more on', 'I start to use', 'from attention to words and sentence meaning to attention to facial changes and gesture'. The vocabulary used translates a change in the participants' strategies. The data reflects a strong coincidence between listening and speaking strategies. The respondents' listening strategies affect their speaking strategies, and vice versa, as they report almost systematically both their behaviour as a hearer and as a speaker. The respondents reported pragmatic reasons for using intonation and/or body-language both as a hearer and as a speaker, e.g. 'to be clearer to others', 'to understand what speaker mean', 'for others to focus on what I say', 'stress the words to express my meaning'. Contrary evidence, or information that does not confirm the themes includes metacognitive strategies reported by one participant: 'I should communicate spontaneously rather than memorise'.

The above results show that main participants, almost uniformly, reported on the change in their strategies, characterised by an orientation to others' and one's own prosodic and other non-verbal behaviour. The narrative passage shows evidence of the main group participants' awareness of the pragmatic implications of paying attention to prosodic and other non-verbal forms of communication: 'to be clearer to others', 'to understand what speaker mean', 'for others to focus on what I say'. They also report an increased attention to ostensive cues: 'pay more attention', 'pay attention now compared to before I paid none', 'focus more on', 'I start to use', 'from attention to words and sentence meaning to attention to facial changes and gesture'. The narrative passage also shows the participants' recognition of the role of the hearer in relation to that of the speaker, which reflects the purpose of the relevance-based intervention. The idea of the speaker being a hearer and the hearer being a speaker, underpinning the relevance-based intervention, is well reflected in the participants' responses: 'to understand what speaker mean', 'to be clearer to others', 'for others to

focus on what I say’, ‘to express my meaning’. The strong coincidence between listening and speaking strategies developing in parallel unquestionably reflects awareness of a balance between hearer and speaker, which is key to the development of L2 pragmatic competence in the relevance-theoretic model. Such a balanced perspective is key to the hearer’s mindreading and understanding of the speaker’s intentions. In relevance-theory and in the present work, comprehension is not treated in isolation or as opposed to production; it is treated in relation to production. Thus, the role of the hearer is defined in relation to the role of the speaker. These results have key implications for the question of the impact of the intervention on the main group participants’ awareness as it strongly suggests that the change in the participants’ strategies and the awareness-related growth it reflects was caused by the intervention.

Interactional listening as reflected in the main group’s reported strategies allows me to expect main participants to seek or to have gained more exposure to the target language compared to control participants, who may not have developed such strategies if the main participants’ strategies reflect what we believe they reflect, that is the effect of the intervention. This question was investigated, and results are shown in sections 6.1.4 and 6.1.5. The assumption that the main group’s awareness would have developed alongside their competence and that the effect of the intervention on the main group’s competence-related change would presuppose the effect of the intervention on the main group’s awareness-related growth can only be validated through comparing the main group’s strategies-related results to the control group’s.

6.1.2 The control group’s development of strategies

Thematic Analysis revealed two broad themes and four subthemes in the control group’s qualitative responses to the question ‘How have your listening and speaking strategies changed over the past months?’:

Theme 1: less listening-oriented and/or do not reflect listening as an active competence

Subtheme 1: speaking is largely predominant

Subtheme 2: passive or one-way listening, not reflected as being in relation to the speaker

Theme 2: strategies and/or reflection based on the summer course

Subtheme 1: focused on study skills

Subtheme 2: not strategies-related, focused on speaking and/or show little focus on intonation

The themes were integrated into a narrative passage, i.e. a discussion of the themes that emerged from the qualitative data based on short quotes of control group participants:

Control participants' responses reflect predominantly speaking activities, e.g. 'I focus on words to express myself', 'I focus on my pronunciation to sound natural', 'when I talk', and passive or one-way listening takes over from active listening: 'when I listen I take notes', 'listen TED talk', 'watch movies'. Control participants' self-reported strategies reflect study skill development, e.g. 'listen TED talk', 'watch movies', 'I try and think with my brain rather than memorise and recite', 'when I listen I take notes', rather than strategies reflecting changed behaviour as a hearer or a speaker. Some of them are even less strategies-related and/or do not answer the question, e.g. 'when in English lessons, I feel less tired than before', 'speak more fluently', 'feel better', 'when I listened I understood easy words, now I understand much more'. The responses that do reflect a change in strategies either focus on speaking or show little focus on intonation: 'now I focus on organising words to express myself', 'I realise speaking is from words, body language and eye contact to help me understand by others'.

The wider variety of themes and subthemes that emerged from the control data may already suggest that the control group's responses are not as narrowed down as the main group's responses. As well as providing more expected responses and themes, all but one main group participants seemed to be telling the same story.

Integration and interpretation of main and control groups' results reveal evidence of a difference in the different groups' awareness of the pragmatic functions of prosodic pointing, which suggests that the intervention had an impact on main group participants. While all but one main group participants offered an answer that shows awareness of the pragmatics of prosodic pointing as both a hearer and a speaker, only one control group participant referred to non-verbal cues in their answer, and even then, the focus is on speaking. The nature of the between-group difference shows that the main group has been exposed to the intervention and impacted by it, while the control group has not been exposed to it. This impact takes the form of an orientation towards the speaker's prosodic and non-verbal behaviour and a changed behaviour as a hearer. By contrast, the control group's responses are less listening-oriented and do not reflect listening as an active competence or behaviour as a hearer in relation to that of the speaker. This shows that they have not been exposed to a pedagogical intervention focused on enhancing their behaviour as a hearer engaged in inferential comprehension of ostensive behaviour. Instead, they see listening as a skill that they need to practise as an L2 learner, to succeed in listening tests. The English for Academic Purposes summer course they were enrolled in at the time of the study teaches them note-taking skills and tests their listening comprehension of TED talks. The results show that the strategies adopted by the control group respondents reflect the impact of the summer course rather than that of the intervention: 'when I listen I take notes', 'listen TED talk'. One answer offered by the control group participants clearly reflects the classroom: 'when in English lessons, I feel less tired'.

These elements of answer suggest that the control group understood the question as relating to their summer course, while the main group understood it as pertaining to the intervention. This explains why the strategies described by the control group respondents are not pertaining to changed behaviour as a hearer and interactional listening, but instead reflect the kind of passive one-way listening used in listening assignments such as IELTS. It is important to note that learner strategies enabling metacognitive development have proved to be beneficial to language learners (Vandergrift et al., 2006; Vandergrift and Goh, 2012), and the increase in self-confidence reported by the control group may well come as a result of building

metacognitive skills on the summer course. However, they reflect the participants having adopted an active role as students rather than as hearers. It is also worth noting that these results emerged from the interpretation of the participants' self-reported strategies and do not exclude the possibility that other factors may have impacted their strategies, such as exposure to the target language in everyday contexts. Yet, access to the control group's answers and to the between-group difference seems to suggest that the two groups have developed their L2 strategies in different ways.

The bottom line of this observation is that the control group participants reflect on their strategies based on their experience as students on the summer course, while the main group participants reflect on their strategies based on their experience as participants in the intervention. The control group understood and answered the question in relation to the course, while all but one main group participants understood it in relation to the intervention. Having both undertaken the same course and had the same two tutors for a period of three months, it could reasonably have been expected that their responses have more in common and that the main group responses reflect the course as much as they reflect the intervention. The results, therefore, are all the more significant. In that sense, having collected the data while both groups were enrolled on the same summer course allows me to more confidently suggest that the difference is representative of an impact of the intervention on the main group. To make it a more valid interpretation, a between-group comparison of the participants' rating of perceived change in their strategies was conducted and is represented in Figures 3 and 4 in section 6.1.3.

6.1.3 Rating of change in strategies: the main and the control groups

Figure 3 Rating of change in strategies: the main group's perspective

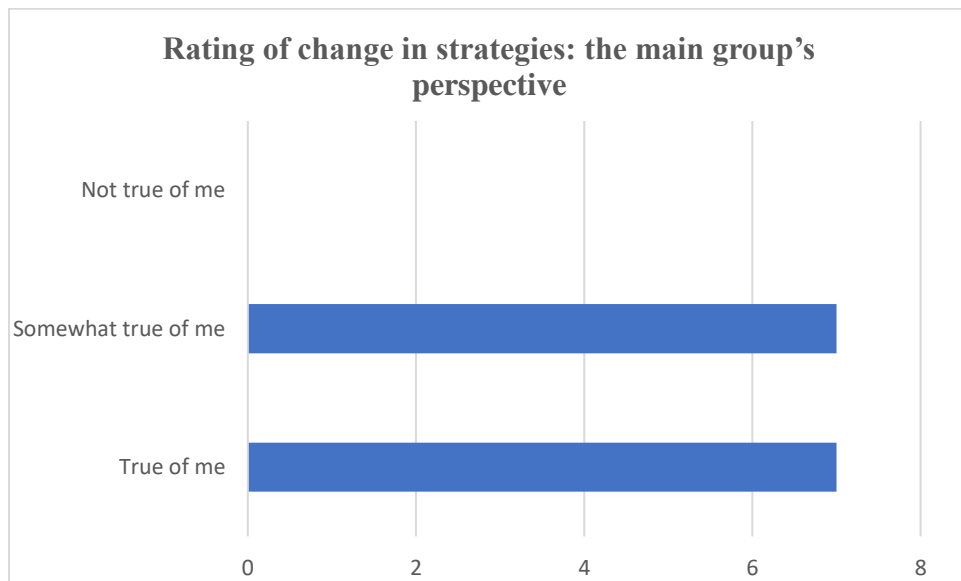
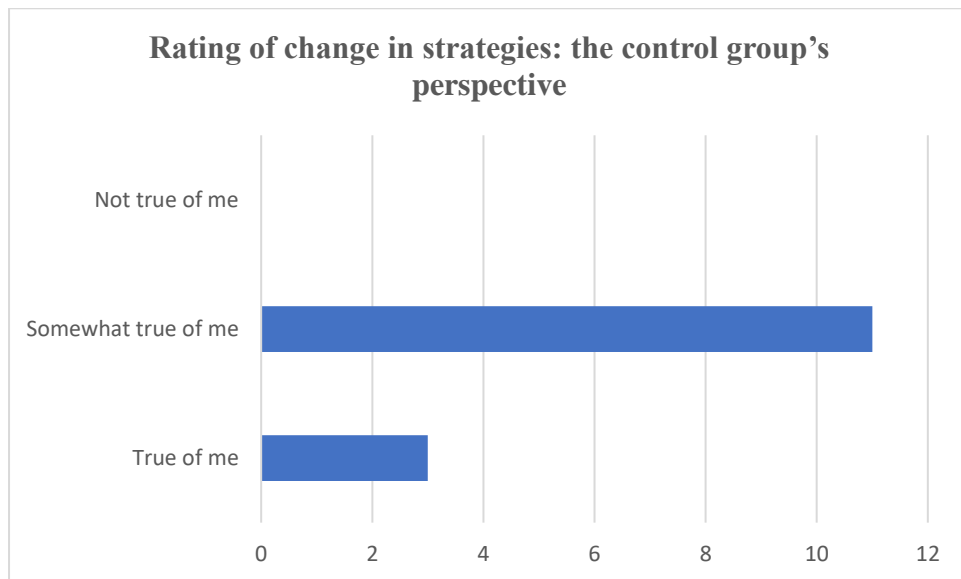


Figure 4 Rating of change in strategies: the control group's perspective



The responses to the three-point Likert scale item present in the post-test questionnaire were represented in the form of cluster charts, with one cluster chart representing the main group participants' rating of perceived change in their listening and speaking strategies over the past three months (i.e. corresponding to both the length of the study and that of the summer course) and another representing the control group

participants' rating of perceived change in their strategies over the same period of time. Figure 3 shows that half of the main group participants are confident about having seen their listening and speaking strategies change over the past three months. By contrast, Figure 4 shows that only 21% (n=3) of the control group participants confidently assert that they have seen their strategies change over the past three months. The results shown in Figures 3 and 4 therefore suggest that main group participants are more convinced about having developed their strategies over the past months compared to the control participants.

Thus, Figures 3 and 4 show what can be seen as a correspondence between differences in rating and in description of strategies: Figures 3 and 4 show a between-group difference in rating of perceived change in strategies, which seems to be consistent with the between-group difference captured in their description of strategies. After a closer look at each control group participant's description and rating of strategies, I found that the participants who had reported strategies that did not qualify as strategies (e.g. 'speak more fluently', 'feel better') also responded 'somewhat true of me' on the scale to rate their change in strategies (Figure 4), while changed behaviour as hearers and speakers almost uniformly reported by main participants corresponded to a higher number of 'True of me' responses (Figure 3).

It might be suggested that the between-group differences in rating and describing one's own development of strategies show that the intervention has had an impact on the main group's strategies as listeners and speakers, on their meta-awareness of the pragmatics of prosodic pointing, and, as a consequence, on their pragmatic awareness. It is important to note that there is no statistical evidence of a significant difference between the main group's and the control group's development of strategies and any conclusion at this point can only be tentative. Nevertheless, the implications of what the qualitative data seems to suggest merit further investigation.

The interactional skills pointed out in the main group-focused narrative passage may have had positive repercussions on their exposure to the target language. The between-group difference observed in this section may have a knock-on effect on the amount

and quality of exposure sought and received by the main group participants compared to the amount and quality of exposure sought and received by the control group.

6.1.4 The main group's exposure to the target language

Thematic Analysis revealed three themes in the main group participants' qualitative responses to the question 'Where and who did you speak English with within the last three months? The participants' answers are believed to help determine whether the participants exposed to the intervention engaged in a wider range of interactional contexts outside of the contexts they are expected to be found in, namely the university and their accommodation.

Theme 1:	places close to them e.g. university, accommodation
Theme 2:	places where they needed to go and/or people they needed to talk to
Theme 3:	places and/or people that suggest that the participants would have created opportunities to communicate outside of their close circle

The themes were integrated into a narrative passage, namely a discussion of the themes that emerged from the qualitative data based on short quotes of main group participants:

Places where main participants had spoken English included places that were relatively close to them (the everyday places) e.g. 'accommodation', 'university friends', and places they needed to go to / people they had to talk to on a regular basis e.g. 'drivers', 'shops', 'train/bus station'. It also included places and people that suggest that the participants had communicated outside of their close circle e.g. 'the reading club', 'strangers', 'local people', 'on the road'.

Themes 1 and 2 suggest routinised exposure to the target language. The quality of exposure is regarded as less significant as it was expected that participants engaged in contexts of interaction which follow a ritualised structure, and which are therefore more predictable. For example, greeting the driver as they get on the bus is not seen

as quality exposure. By contrast, theme 3 may suggest less regularity of input but also less routinised and more unpredictable exposure. This type of exposure may be regarded as more rewarding as it is more likely to involve on-line negotiation of meaning. Although the places described may suggest more quality exposure based on less ritualised interactions, this argument cannot be strongly supported as the participants' answers do not provide sufficiently detailed information on their interactions. In addition, the participant's own interpretation of 'speak English' may vary from one participant to another. They may have included them ordering a latte from the coffee shop as exposure, even though such exposure does not involve prolonged two-way interaction and is not seen as exposure that will help them to further adjust their L2 epistemic vigilance. Regular exposure does not necessarily mean quantity of exposure, and it does not necessarily coincide with quality of exposure either. The point of asking participants about their exposure to English was to see whether the main participants would engage in a wider range of interactional contexts outside their close circle, since part of the intervention invited them to report in a listening journal instances of prosodic pointing experienced outside the classroom. Further interpretation of the main group's themes will be possible once these are seen in comparison with the themes generated by the control group in section 6.1.5.

6.1.5 The control group's exposure to the target language

Thematic Analysis revealed four themes in the control group participants' qualitative responses to the question 'Where and who did you speak English with within the last three months?':

Theme 1:	places close to them e.g. university, accommodation
Theme 2:	places where they needed to go and/or people they needed to talk to
Theme 3:	places and/or people that suggest that the participants would have created opportunities to communicate outside their close circle
Theme 4:	participants only mentioning places/people within their close circle

The themes were integrated into a narrative passage, namely a discussion of the themes that emerged from the qualitative data based on short quotes of control group participants:

Places where the control group participants had spoken English also included places that were relatively close to them (the everyday places) e.g. 'accommodation', 'university friends', and places they needed to go to and/or people they had to talk to e.g. 'accommodation reception', 'shops'. Contrary evidence included a participant that had been looking for a part-time job to improve her English skills and meet more/new people and who mentioned 'staff at work/customers'. Another theme emerged from the control group's data: participants that only mentioned places and/or people within their close circle, e.g. 'classroom with teachers', 'classmates', 'my roommate', 'in my room with online teacher'. One of them added that exposure was 'limited'.

Both main and control groups reported that they had spoken English in their everyday places and/or places they had to go to. Both groups also reported that they had spoken English with people within their close circle and/or people they had to talk to. More main group participants seemed to have communicated outside of their close circle: 'with strangers', 'local people', 'on the road', and 'at the reading club', compared to one control group participant: 'with staff at work and customers'. What seems to be more significant is the additional theme that emerged from the control group. While main participants mentioned their close circle, they all also included places and/or people outside the classroom and their accommodation. However, only participants from the control group reported to have only spoken English within the classroom environment or their accommodation. The results show that four out of fourteen control group participants did not speak English outside the classroom or their accommodation over the course of the summer of 2017: 'in the classroom with teachers', 'with classmates', 'with my roommate', 'in my room with online teacher', and one of them added that exposure was 'limited'. This main difference between main group's and control groups' descriptions of exposure to the target language may suggest that the difference in the nature of exposure between main and control groups

results from the intervention. It is worth noting that the small size of the sample makes generalisation of findings difficult. More evidence of a difference between main and control groups needs to be found if I am to suggest that the main group's enhanced awareness reflected in the change of their strategies have impacted the nature and frequency of their exposure to the target language. To make a stronger case, a between-group comparison of the participants' rating of frequency of exposure to the target language was conducted and represented in Figures 5 and 6.

6.1.6 Rating of exposure to the target language: the main and the control groups

Figure 5 Main group's rating of exposure to English outside the classroom

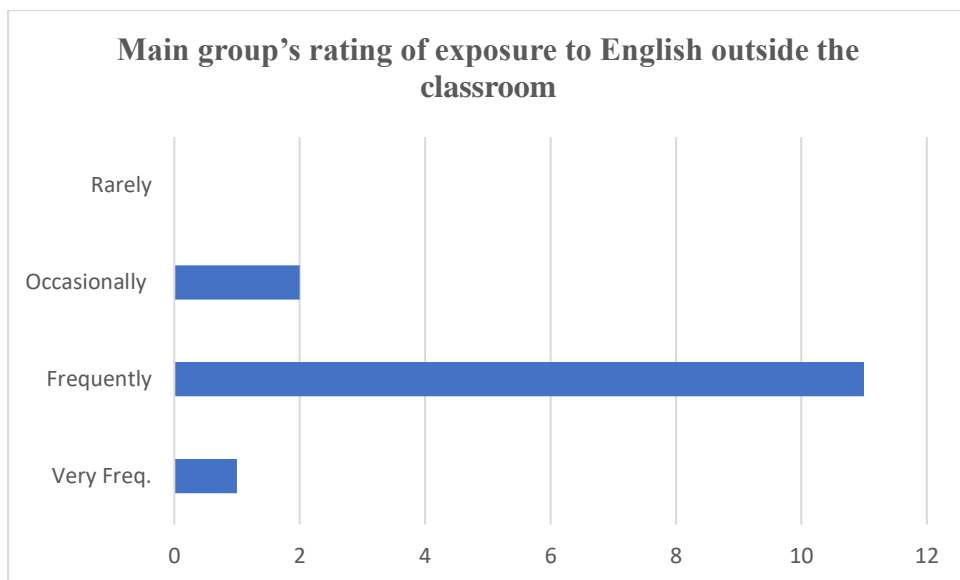
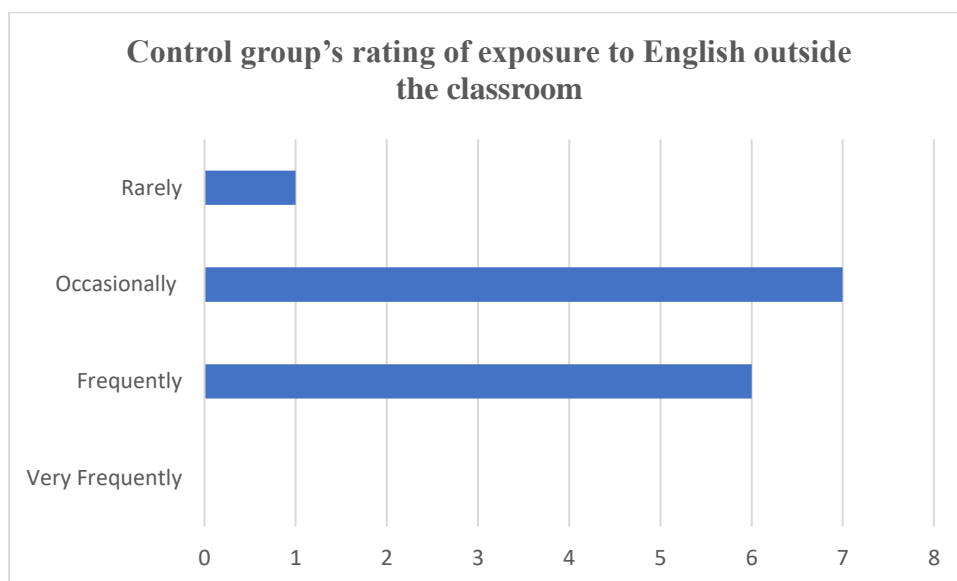


Figure 6 Control group's rating of exposure to English outside the classroom



A between-group comparison of the participants' rating of frequency of exposure to the target language was used to help me determine whether there was convergence between the nature and frequency of exposure reported by the participants. Figures 5 and 6 show that there is what can be seen as a correspondence between what the narrative passages suggest in terms of the difference in participants' quality of exposure and the frequency of their exposure to the target language outside the classroom. As Figure 5 shows, main group participants' responses were divided into 'very frequent', 'frequent' and 'occasional' exposure to the target language, with most participants (79%; n=11) reporting having been 'frequently' exposed to the target language in the last three months. Figure 6 shows that control group participants' responses were divided into 'frequent', 'occasional' and 'rare' exposure to the target language, with half of the participants reporting having been occasionally exposed to the target language in the last three months. This is in line with the description of exposure offered by the control group. The comparison of the main and control groups' reported exposure to the target language over the course of summer 2017 shows that the main group participants have been more frequently exposed to the target language outside the classroom compared to control group participants. This is consistent with what the results in 6.1.5 have shown about the control group participants having not spoken English outside of the classroom/their close circle in the same period.

It can be tentatively concluded from both strategies- and exposure-related results from both main and control groups that the intervention has had an impact on the main group's awareness as reflected in the change of their strategies, believed to have had a knock-on effect on the nature and frequency of the exposure to the target language sought and received by the main group participants. Statistical evidence was sought to scientifically validate the qualitative findings. The strategies- and exposure-related items were only present in the post-test questionnaires. Analysing and quantifying a qualitative item that was present in both pre- and post-test questionnaires can help in validating the current assumption that the intervention has had an impact on the main group participants' awareness and that evidence of awareness-related growth was found in the qualitative data.

6.1.7 Pre-/immediate post-test difference: awareness of the role of intonation in English

One additional qualitative open-ended item present in both pre- and post-test questionnaires was quantified for statistical analysis purposes. First, the SPSS Wilcoxon signed rank test was used to determine whether there was a significant difference between the main group's pre- and post-test responses to the open-ended item. Then, the same test was used to determine whether there was a significant difference between the control group's pre- and post-test responses to the item. The open-ended item was asking the participants to complete this sentence:

One role of intonation in English is to _____.
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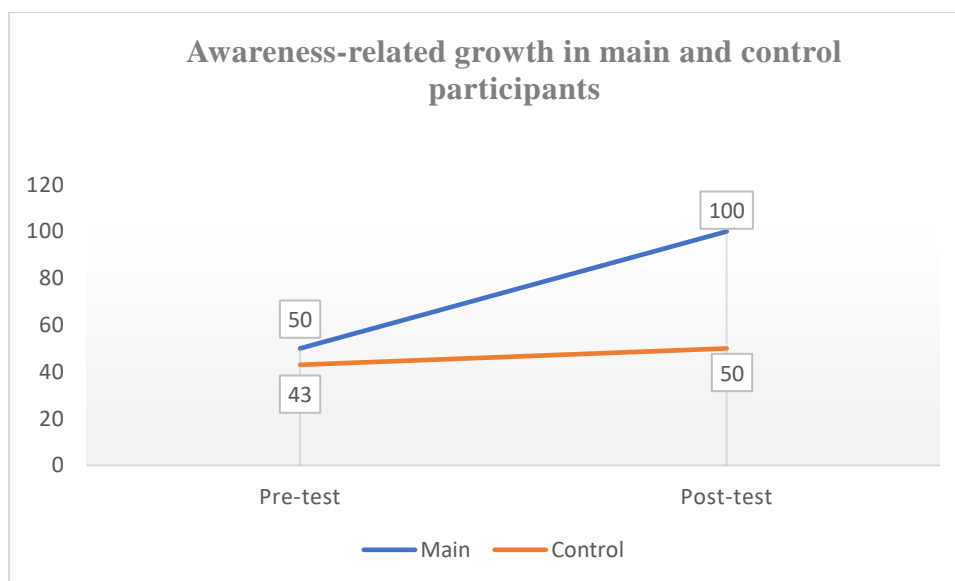
The term 'intonation' was used to refer to prosody or the prosodic element in prosodic pointing for simplification purposes. The qualitative data was scored based on whether the responses were expected or not. This means that the answer was not necessarily wrong, but based on what the participants were tested for and based on the focus of the intervention, a certain type of answers was accepted as 'correct'. Each expected answer received a score of 1, while unexpected answers were assigned a score of 0.

Examples of expected answers: ‘to help me find important words’, ‘to listen and highlight point in the sentences’

Examples of unexpected answers: ‘to help me know the emotion of the other speaker’, ‘to speak more like a native speaker’

The pre- and post-test means for the main group (pre-test mean: 0.50; post-test mean: 1) and for the control group (pre-test mean: 0.43; post-test mean: 0.50) respectively are represented in Figure 7 below. The line graph suggests a between-group difference in progression and the development of the main group’s awareness of what the role of intonation is. A look through the qualitative data will show that their responses reflect the focus of the intervention.

Figure 7 Awareness-related growth in main and control participants



The SPSS Wilcoxon signed rank test was used in order to determine whether the differences between the main group’s pre- and post-test scores were due to actual differences between their performance in pre- and post-tests. The assumption, if the intervention has had an impact on the main group, is that the difference between the main group’s pre- and post-test results will be significantly different, while the difference between the control group’s pre- and post-test results will be shown as not significant.

Table 1: Hypothesis Test Summary – Awareness-related growth in main group

Null Hypothesis	Z / P-value	Decision
Z is less than -1.96, or greater than 1.96	-2.646	Reject the null hypothesis
The P-value is inferior to 0.05	0.004	Reject the null hypothesis
The significance level or alpha level is 0.05		

The P-value is 0.004 and is therefore inferior to 0.05 (alpha level). This means that the null hypothesis (H0), according to which there is no difference or effect, is rejected, and the alternative hypothesis (H1), according to which there is some difference or effect, is accepted. This suggests that the main group participants' awareness of the role of intonation was significantly enhanced between the pre- and post-test assessments. This constitutes some evidence that the intervention has had an effect on the main group's metapragmatic awareness, as the participants were able to link the cue, i.e. intonation, to its pragmatic function, e.g. to highlight important information. At the same time, it reflects the participants' increased orientation to intonation as ostensive behaviour, namely an enhancement of their pragmatic awareness. The implications of this is that an enhancement of the main group's metapragmatic awareness and pragmatic awareness is believed to indicate a growth in pragmatic competence, since they are both integral parts of pragmatic competence (Ifantidou, 2014). These results will need to be consolidated.

Further qualitative evidence of awareness-related growth in main participants is provided as it is found that the open-ended responses seem to coincide with the main group participants' descriptions of their strategies. There seems to be a convergence

between the main group participants' descriptions of the role of intonation in English (i.e. responses to the open-ended question) and their descriptions of developing strategies. Their descriptions of the role of intonation in English reflect their orientation to others' and one's prosodic behaviour, which also emerged from the main participants' reporting of strategies. They also reflect their awareness of the parallel between the role of the hearer and that of the speaker also present in the main group participants' description of strategies, e.g. 'to attract listener attention, 'to let people who are listening know meaning of words', 'help us identify important information', 'let other know where she/he should pay attention to'²⁷.

The main difference that is seen between the main participants' descriptions of the role of intonation in English and their descriptions of own strategies is that they do not only take intonation but also what they call 'body-language', 'facial changes' into account in their descriptions of change in strategies. This strongly suggests that it is their awareness of the pragmatic role of intonation as involved in prosodic pointing in English that was enhanced. Further evidence may be found when looking into the intervention itself and the role that exposure to prosodic pointing at stage 2 played in raising awareness in section 6.3.1.3.

Evidence of metapragmatic awareness and pragmatic awareness from both the sentence-completion question and the strategies-related open question shows not only that the participants' awareness of the pragmatic role of intonation in English was enhanced, but also that it had impacted their strategies as hearers and speakers. This shows again how complementary quantitative and qualitative items and quantitative and qualitative analysis can be. Mixing methods allows me to draw more comprehensive interpretations of results. To ensure that the significant difference obtained from comparing the main group participants' pre- and post-test awareness reflects what we believe it reflects, that is the effect of the intervention on the participants' awareness-related growth, the control group's pre- and post-test awareness of the role of intonation in English needs to be statistically tested for significance in exactly the same way.

²⁷ For full details of the main group's and control group's pre- and post-test responses, see Appendix Five.

Table 2: Hypothesis Test Summary – Awareness-related growth in control group

Null Hypothesis	Z / P-value	Decision
Z is between -1.96 and 1.96	-.378 ^b	Accept the null hypothesis
The P-value is superior to or equals 0.05	0.353	Accept the null hypothesis

The significance level is 0.05

The P-value is 0.353 and is therefore superior to 0.05 (alpha level). This means that the null hypothesis (H0), according to which there is no difference or effect, is accepted, and the difference is therefore not statistically significant. The test assessed whether Chinese L2 hearers could explain (in their own words) the role of intonation as an ostensive cue guiding them to the speaker’s intended meaning. In other words, it tested the participants’ metapragmatic awareness. At the same time, it tested the increased orientation to the speaker’s prosodic behaviour, namely pragmatic awareness. No significant difference in the control group’s awareness between the pre- and post-tests was shown. The above statistical findings validate the assumption that the main group’s pre- and post-test difference is significant while the control group’s is not. The results show that the control group has not developed metapragmatic and pragmatic awareness the way the main group has. These results enable me to more confidently conclude that the intervention must be the cause for the significant variation between the main group’s pre- and post-test results. There is enough evidence of the intervention having impacted the main group participants’ awareness of the pragmatic role of intonation as involved in prosodic pointing in English to conclude that the intervention was effective in enhancing the main group’s awareness of the pragmatic role of prosodic pointing. Again, since evidence of pragmatic metapragmatic awareness and pragmatic awareness is an indicator of pragmatic

competence, the results present solid reasons to believe that the main group's pragmatic competence was enhanced via exposure to the intervention. In section 6.2, this will be further validated.

6.2 Impact of the intervention on competence-related change

The significance of the difference between the main group's pre- and post-test scores was statistically analysed in order to determine whether the main group's competence was significantly increased in the post-test. This will potentially provide evidence of an impact of the intervention on the dependent variable (i.e. pragmatic competence). As described in Chapter Five, the dependent variable represents the outcome whose variation is being investigated, while the independent variable (i.e. the intervention) represents the input or potential cause for variation. The difference between the control group's pre- and post-test scores was also statistically analysed in order to find out whether their competence was significantly increased in the post-test. This will shed light on whether the lack of the independent variable led to no significant difference between the control group's pre- and post-test results and whether the intervention is the reason for variation. My assumption is that the independent variable causes the dependent variable to vary. If statistical analysis shows a significant difference between the main group's pre- and post-test results, while it shows no significant difference between the control group's pre- and post-test results, I will be able to confidently conclude that the cause for variation is the intervention. This would thereby show the effectiveness of the intervention in enhancing the main group's pragmatic competence.

The data selected for analysis consisted of the participants' responses to four test items present in both pre- and post-test questionnaires. As explained in Chapter Five, I kept two items identical to test whether the participant's accuracy had increased between pre- and post-test assessments. Both main and control groups responded to two items that were identical in both pre- and post-tests and two items that tested the same skill but employed a different trigger-utterance.

Example of identical item: “My name is Bond. James Bond.” Underline the word(s) that carry an accent. Explain why.

*Example of expected/right answer:*²⁸ “My name is Bond. James Bond.” Justification: ‘James Bond, not Alex Bond.’

Examples of different items:

“You told me what Emilia wants, but what do you want?” (Pre-test version);
He pointed his finger at her and screamed: “She did it”. Underline the word(s) that carry an accent.” Explain why. (Post-test version).

Examples of expected/right answer: “You told me what Emilia wants, but what do you want?” Justification: ‘The question is about ‘you’, not ‘Emilia’.

Example of expected/right answer: He pointed his finger at her and screamed: “She did it.” Justification: ‘Not me, not other people, the speaker wanted to point out this woman did it and emphasise ‘she’.’

Each response was assigned a numeric score of 0.25, which gave each participant a total score of 1 if they answered all four items correctly. To score the data, both the word(s) underlined and the pragmatic justification were taken into account. This means that a participant would not only need to underline the right word(s), but they would also need to provide the right pragmatic justification for it. The scored data, data for analysis, thus consisted of both quantitative and qualitative data used quantitatively. This entails that the qualitative explanations, i.e. the pragmatic justifications that were part of the participants’ answers, were quantified and integrated into the numeric data. Examples of right and wrong answers are provided below.

²⁸ The expected/right and wrong answers provided are actual answers given by the participants.

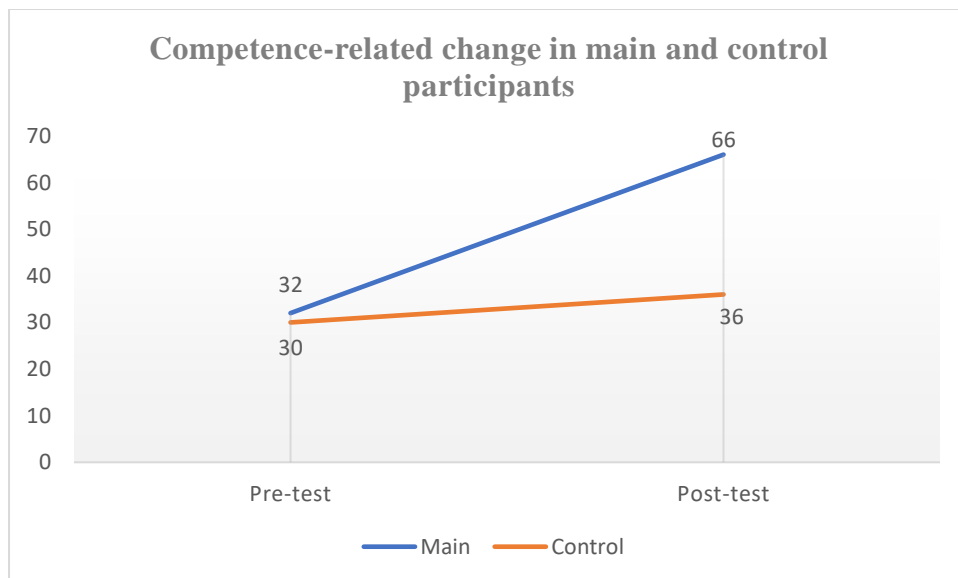
Example of right answer (score: 0.25): “Is the extension number 325?” “No, it’s 345.”
Justification: ‘I want you to pay attention to the only number that is incorrect’ (Right accenting and right justification)

Example of wrong answer (score: 0): “Is the extension number 325?” “No, it’s 345.”
Justification: ‘The number is the important information’ (Both wrong accenting and wrong justification)

Example of wrong answer (score: 0): “You told me what Emilia wants, but what do you want?” Justification: ‘It is what you want not what Emilia wants’ (Right justification but incorrect accenting)

Once numerically scored, the data was first inputted onto an Excel file to help organise and prepare the data for statistical analysis, and to calculate the pre- and post-test mean values (i.e. average of positive scores) for both main and control groups. This is represented by the line graph below.

Figure 8 Competence-related change in main and control participants



The two different lines of progression shown on Figure 8 suggest that the difference between the main group’s pre-test and post-test results (pre-test mean: 0.32; post-test mean: 0.66) is substantial compared to the difference between the control group’s pre-

and post-test results (pre-test mean: 0.30; post-test mean: 0.36). This apparent difference needs to be tested for statistical significance. The SPSS Wilcoxon signed rank test was used in order to determine whether there was a significant difference between the main group's pre- and post-test scores. The results of the Wilcoxon sign rank test are shown in the table below.

Table 3: Hypothesis Test Summary – Competence-related change in main group

Null Hypothesis	Z / P-value	Decision
Z is less than -1.96, or greater than 1.96	2.446 ^b	Reject the null hypothesis
The P-value is inferior to 0.05	0.007	Reject the null hypothesis

The significance level is 0.05

The P-value is 0.007, which is inferior to 0.05 (alpha level). This means that the null hypothesis (H0), according to which there is no difference or effect, is rejected, the alternative (H1) is accepted, and the difference is said to be significant. This constitutes some evidence that the intervention has had the desired effect on the main group's pragmatic competence, namely its enhancement. A closer look at the main group participants' test responses and qualitative explanations provides further evidence that the intervention was effective and allows me to gain a better understanding of how the main group participants' competence was enhanced. The use of identical items in pre- and post-test questionnaires helped in identifying and providing evidence of the participants' enhanced accuracy in selecting the right accented word(s) (i.e. more precise accentuation). It has also enabled me to observe enhanced accuracy in terms of the participants' pragmatic explanations for selecting the word(s) that carry the accent, as the following examples illustrate:

Example 1 of pre- and post-test answers that show enhanced accuracy:

Pre-test answer: “My name is Bond. James Bond.” Justification: ‘The key information is the name.’

Post-test answer: “My name is Bond. James Bond.” Justification: ‘His name is James Bond, but not other Bond.’

Example 2 of pre- and post-test answers that show enhanced accuracy:

Pre-test answer: “Is the extension number 325? No, it’s 345.” Justification: ‘The numbers are the most important content you want to let others know.’

Post-test answer: “Is the extension number 325? No, it’s 345.” Justification: “‘4’ is to correct the number; only ‘2’ is wrong.’

The control group’s responses were scored in exactly the same way as the main group’s, and the SPSS Wilcoxon signed rank test was used to determine whether there was a significant difference between the control group’s pre- and post-test scores. The assumption is that, if the intervention has had the desired effect on the main group’s post-test scores, as the first statistical test seems to suggest, then the control group’s pre- and post-test scores should not be significantly different.

Table 4: Hypothesis Test Summary – Competence-related change in control group

Null Hypothesis	Z / P-value	Decision
Z is between -1.96 and 1.96	-.905 ^b	Accept the null hypothesis
The P-value is superior to or equals 0.05	0.133	Accept the null hypothesis

The significance level is 0.05

The P-value is 0.133 and is therefore superior to 0.05 (alpha level). This means that the null hypothesis (H0), according to which there is no significant difference, is accepted. There is no significant statistical difference between the control group's pre- and post-test scores. The control group was taking the same summer course as the main group at the time of the pre- and post-test assessments, and their knowledge as L2 learners is not static, which means that it continues to develop whether explicitly or implicitly. It is therefore likely that the control group will have enhanced their language ability, but not significantly so for the specific skills that the tests targeted.

In this section, it has been shown that the main group's pre- and post-test scores were significantly different, with their post-test scores being significantly higher than their pre-test scores. The control group's pre- and post-test scores were shown to not be significantly different: the control group's post-test scores were not significantly higher than their pre-test scores. This is enough evidence to suggest that the intervention has had an impact on the main group's pragmatic competence, because, as in all controlled experiments, only the condition put to the test can be responsible for a change in the responses obtained. Thus, it can be confidently concluded that there is statistical evidence of significant change that was likely caused by the intervention, which strongly suggests that the intervention is the cause for the main group's enhanced pragmatic competence.

6.2.1 General discussion based on research findings of 6.1 and 6.2

Both qualitative and statistical evidence of the main participants' awareness-related growth, including evidence of their metapragmatic awareness are in line with the statistical evidence of the main group participants' competence-related change. Both strands of the results seem to be telling a similar story about the intervention: the intervention has had an impact on both the main group participant's awareness and competence. It was speculated that results on pragmatic awareness may suggest a change in pragmatic competence. The growth in pragmatic awareness demonstrated by the results reported in section 6.1 not only suggest a change in pragmatic competence, but it also and crucially further validates the enhancement of the main participants' pragmatic competence reported in section 6.2. These results were

consolidated by the pre-/post-test between-group design. Having evidence that neither of the control group's competence or awareness were significantly enhanced further demonstrates that the independent variable (i.e. the intervention) must be the cause for the dependent variable variation (i.e. pragmatic awareness and competence). In other words, it further validates that the main group's enhancement of both their awareness and competence reflects what we believe it reflects, namely the effect of the intervention.

From the above, a first conclusion can be offered as regards the role of awareness in acquisition and the relationship between awareness and competence. As the intervention's purpose was to raise Chinese L2 hearers' awareness of the pragmatic function of prosodic pointing to, as a consequence, enhance their pragmatic competence, evidence of the intervention having raised participants' awareness and evidence of the intervention having enhanced their pragmatic competence likely shows that the main group's enhanced awareness and enhanced pragmatic competence coincide. This conclusion supports Ifantidou's definition of pragmatic competence (2014), which she proposes must pre-suppose both pragmatic awareness and metapragmatic awareness. The statistical and qualitative evidence that shows that the control group's pragmatic awareness and pragmatic competence did not develop to a significant extent further validates that pragmatic awareness, metapragmatic awareness and pragmatic competence develop in parallel. If a growth in awareness is not found, a change in competence is not found either.

However, it cannot be strongly supported that growing pragmatic awareness and metapragmatic awareness is what caused enhanced competence. The results can be said to be in accordance with such a speculation, but they cannot strongly support it. Instead, it may be worthwhile to focus on the nature of the awareness-competence relationship from the perspective of Ifantidou's definition (2014) and the definition adopted in the present work. Awareness-related growth is seen as part and parcel of competence-related change and therefore as further evidence of the main participants having developed their pragmatic competence rather than its causal factor. This refined hypothesis about the awareness-competence relationship needs further exploring and validating in the next section.

As has been seen, developing pragmatic competence as L2 hearers also involves the development of the main group participants' abilities as L2 speakers. The main group participants seem to have developed their behaviour as L2 hearers in relation to the speaker's ostensive behaviour. The qualitative data demonstrates that the main group participants have developed pragmatic competence as speakers alongside developing pragmatic competence as hearers. Their development likely reflects ostensive-inferential competence and, consequently, the effect of the relevance-based intervention. The results also agree with the cognitive-psychology idea that 'each one of us is both a speaker and a listener' (Cooper Cutting, 2009, p. 193). Our behaviour as a hearer may impact our behaviour as a speaker. Part of the observed awareness-related growth therefore is growing awareness of the speaker's ostensive behaviour or of their role as a hearer, involving paying attention to and interpreting the speaker's ostensive behaviour. This is believed to translate into the main group participants holding a better chance at reading the speaker's mind compared to the control group participants having not developed their pragmatic behaviour as L2 hearers. This shows that using the relevance-theoretic comprehension procedure, and the social cognition mechanisms that underpin it, can lead to the development of a more active pragmatic competence as an L2 hearer, that is as a hearer oriented towards and using the speaker's ostensive paralinguistic behaviours as guiding cues to her meaning. It also strongly suggests that using relevance theory to inform instructed L2 pragmatics acquisition can help in tackling the problem of the L2 hearer's detachment from the speaker and engage them in top-down processing. This development of the main group participants' hearing abilities and epistemic vigilance as L2 hearers may be further validated when looking at qualitative and quantitative findings within the intervention itself in the next section. These early findings give me good reasons to think that relevance theory's ostensive-inferential communication domain bears key implications for L2 pragmatics instructional studies focusing on ostensive-inferential comprehension and the development of epistemic vigilance in L2 hearers.

On a methodological note, the results obtained, particularly those regarding the impact of the intervention on the main participants' pragmatic awareness, have shown the importance of the qualitative data and qualitative findings in investigating the

development of the main participants' awareness, and what it shows about their developing behaviour as hearers in relation to the speaker is worth pointing out. It was important to take into account both quantitative and qualitative elements, as it enabled me to draw more in-depth conclusions as to the impact and effectiveness of the intervention. Also, importantly, not only have they both contributed to testing the research hypothesis and shedding light on the impact of the intervention, but, as this section has shown, they have allowed me to start exploring the assumptions listed at the end of Chapter Four, in particular the one related to the relationship between awareness and competence. The next section will now look more into the nature of this impact.

At this stage, it is important to bear in mind that although the intervention's outcomes as reflected in sections 6.1 and 6.2 seem to indicate that the intervention has had the intended effects, namely the enhancement of the main participants' pragmatic competence, a closer look at the nature of the impact of the intervention needs to be taken in order to determine exactly to what extent the main group participants have developed their pragmatic competence. At the same time, it will shed further light on the role played by the intervention itself (i.e. its methodologies) in fostering pragmatic awareness, metapragmatic awareness, and pragmatic competence.

The next section will focus on further exploring the five implications of the hypothesis, highlighted at the end of Chapter Four on page 119 and reiterated below:

- The relevance of relevance theory for L2 pragmatic competence development**
- The development of epistemic vigilance as part and parcel of pragmatic competence**
- The relationship between awareness and competence**
- The 'special' role of prosodic pointing and the multimodal argument**
- The implications of exposure to prosodic pointing for Chinese L2 hearers**

6.3 The intervention's impact on the main group participants' pragmatic competence

Assessing the effectiveness of the intervention not only involves investigating whether an impact has occurred but also how it has occurred and what exactly the nature of this impact is. This third section focuses on shedding light on what exactly has been crucial in making the methodologies effective, and addressing the implications of the hypothesis, which will be more thoroughly discussed in Chapter Seven.

To what extent has the main group's pragmatic competence developed? To what extent has the intervention been effective in developing the main group's pragmatic competence? This section focuses largely on the main group's performance at stages 1 and 2 of the intervention, to measure when and how their pragmatic competence have developed. We have seen in the earlier chapters that the attentional and inferential abilities that pragmatic awareness involves, namely, as defined in Chapter Four on page 104, the hearer's orientation or alertness to the speaker's ostensive behaviours as cues to her intentions and the hearer's assessment of his own interpretative route (i.e. epistemic vigilance), underpinned my definition of pragmatic competence as an L2 hearer. Looking further into the intervention itself and the main group's performance at various stages of the intervention will help determine whether and how the intervention has helped in raising their pragmatic awareness. It will at the same time further assess the strength of my proposal (i.e. the main hypothesis), namely that *exposure to prosodic pointing as ostensive multimodal input, will play an important role in setting the stage for Chinese L2 hearers' recognition of relevance, raising their pragmatic and metapragmatic awareness and improving their pragmatic competence.*

So, what is it about prosodic pointing that makes it worth exploiting for the development of pragmatic competence? One assumption behind the idea of exposing Chinese L2 hearers to prosodic pointing is that the pointing, gestural dimension of prosody and its co-existence with more behavioural cues to ostension is what will facilitate an understanding of its pragmatic function(s). This assumption implies that there is a need for the refinement of the pragmatics-prosody interface on the grounds that the pragmatics-prosody interface is not sufficient to account for how utterances

are interpreted: prosody is never interpreted in isolation but in relation to other co-occurring non-verbal cues, and these are together used towards interpreting the speaker's intentions. Based on this assumption, it is predicted that access to prosodic pointing will give participants access to richer input and an opportunity to challenge their interpretations in working their way towards the speaker's intended meaning. To what extent is this validated by the data?

6.3.1 Results from stages 1 and 2: exposure to audio versus audio-visual input

6.3.1.1 First supporting argument for using prosodic pointing

According to a triangulation design, both quantitative and qualitative data were collected and analysed concurrently, then integrated into the interpretation of results. The participants' interpretive processes were accessed via self-reporting of interpretive thoughts available while answering comprehension questions.

The participants' comprehension test answers were measured based on the participants' responses to the three test questions at stage 1 and stage 2. The three test questions were presented in Chapter Five on page 155. From comparing the answers obtained at stage 1 and at stage 2, I could identify four categories of participant progress: maximum score, improvement, no learning and negative learning as represented below.

Counting of right answers (1) and wrong answers (0)

1-1 = maximum score

0-1 = improvement

0-0 = no learning

1-0 = negative learning

Participants who obtained a 'maximum score' answered correctly to the test question at both stages 1 and 2. They are said to have reached a maximum score at stage 1 and therefore cannot obtain a higher score at stage 2. They have at least reached a relevant enough interpretation at both stages. However, we will see that the qualitative

responses of the participants may contradict results that are quantitatively seen as being maximal, in that the qualitative responses may indicate further improvement. Respondents showing ‘improvement’ answered incorrectly at stage 1 and correctly at stage 2, showing progression and possibly use of ostensive visual cues. To be more specific, by ‘improvement’ I mean that the participants would go from providing a wrong answer at stage 1 to providing at least a relevant enough interpretation at stage 2. The following example is based on sample 3 of the dialogue provided in Chapter Five on page 155:

Danica: ²⁹ He wasn’t no = ‘no’ (stage 1) → No = he agrees with her (stage 2)

In the above example, Danica challenged her ‘default’ interpretation and L1-based assumption that ‘wasn’t’ must mean ‘no’ and reached the intended interpretation. Respondents showing ‘no learning’ answered incorrectly at both stages and are therefore seen as showing no learning between stage 1 and stage 2. Respondents showing ‘negative learning’ answered correctly at stage 1 but incorrectly at stage 2. This is unexpected but could happen as a result of misusing and misinterpreting visual cues. All four categories need further investigation based on the respondents’ qualitative answers to the open-ended question presented in Chapter Five on page 154: How do you know? Evidence of qualitative improvement would involve participants going from a relevant enough interpretation at stage 1 to the optimally relevant interpretation at stage 2. Qualitative improvement would also involve evidence of participants using the visual input available at stage 2 appropriately to infer Speaker B’s intended meaning.

A first, general glance over the qualitative data, shows that the participants reported more data related to their interpretive thoughts at stage 2 compared to stage 1: 238 words were collected at stage 1 compared to 344 words at stage 2. Overall, stage 2 brings about more of an interpretation from the participants; it is not just about answering the question. More has been noticed, which may be due to the participants having visual access to interpretive clues and therefore more to talk about. It may also

²⁹ I have used the participants’ English and Chinese names and have mixed them all up in order to respect anonymity. The participants’ English names were only used in the classroom.

be due to the visual input giving the participants more to remember in the immediate recall. It does in any way show that these extra contextual clues tend to be picked out by their attention, but whether these are then used in the inferential path is what a closer look at the qualitative data and its convergence with the comprehension test results will seek to show. As well as the quantity of data, the quality of data varies from stage 1 to stage 2, with intention-oriented interpretations emerging, particularly from interpreting answer 3. For instance, Skylar, Zendric and Ruiping provide intention-oriented interpretations: ‘No’, agrees with her’, ‘He thinks she’s right’, ‘Yes, he agrees’, which shows their ability to read Speaker B’s mind.

On the surface, a comparison of the participants’ stage 1 and stage 2 answers seems to offer surprising results suggesting that there is no additional benefit of having access to prosodic pointing (i.e. prosodic and gestural pointing with facial expression and head movement) rather than to prosody alone on verb form.

Figure 9 Sample 1 results: before and after integrating qualitative data

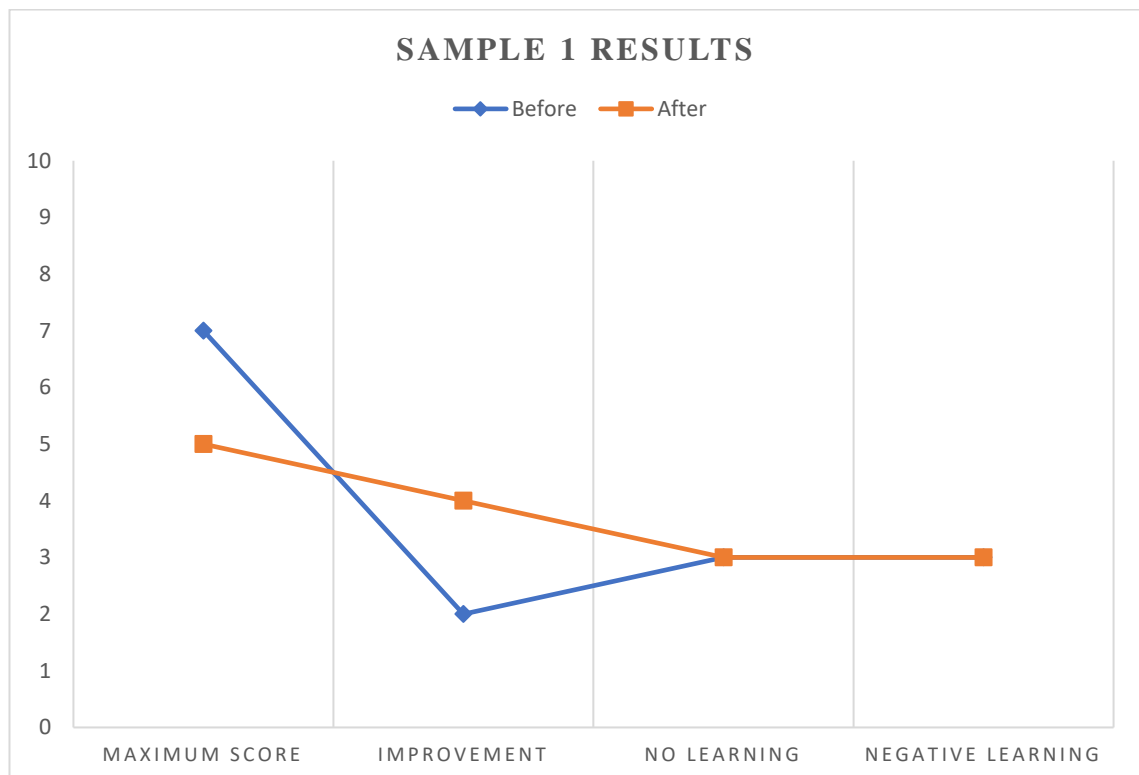


Figure 9 represents the difference between what sample 1 comprehension test results suggest and what the results tell us about the participants’ performance once the

qualitative data has been integrated. As Figure 9 shows, sample 1 quantitative results report that 47% (n=7) of the participants obtained a maximum score, 13% (n=2) of them have improved and the rest of them report either no learning (20%; n=3) or negative learning (20%; n=3). What needs to be further investigated here is what is behind a ‘maximum score’ result: whether it means that the participants have got the right answer both times but have not got to the intended interpretation, or that their qualitative interpretation shows that they have reached the intended conclusion the second time and so that they have improved.

The qualitative data shows that three out of the seven ‘maximum score’ participants improved between stage 1 and stage 2 by getting closer to the intended interpretation at stage 2, e.g. Eason: ‘He’s surprised she didn’t see him; his face looks negative’. None of them, however, reported to have understood that Speaker B disagrees. Other ‘maximum score’ participants noticed more at stage 2, including Speaker B’s head shake and his frown, but they did not go as far as using the cues in the inferential path. Out of the two participants reporting ‘improvement’, one did not provide evidence of their interpretation nor of them reaching the intended interpretation, while the second ‘improvement’ jumped from providing a wrong answer (at stage 1) to one that contains the closest reported interpretation to the intention to disagree (at stage 2): ‘He \ was – meaning ‘no’’ (Yuyue). The participants reporting ‘no learning’ and ‘negative learning’ have one thing in common, which is to have read the noticed contextual cues wrong and misinterpreted Speaker B’s intentions. The ‘no learning’ participants used the ‘face that says no’ to consolidate (at stage 2) their wrong answer (at stage 1), while the ‘negative learning’ participants changed their originally right answer for the wrong answer based on the face of the speaker: ‘Wasn’t; face = no’ (Kevin).³⁰

³⁰ For full details of the participants’ responses, see Appendix Six.

Figure 10 Sample 2 results: before and after integrating qualitative data

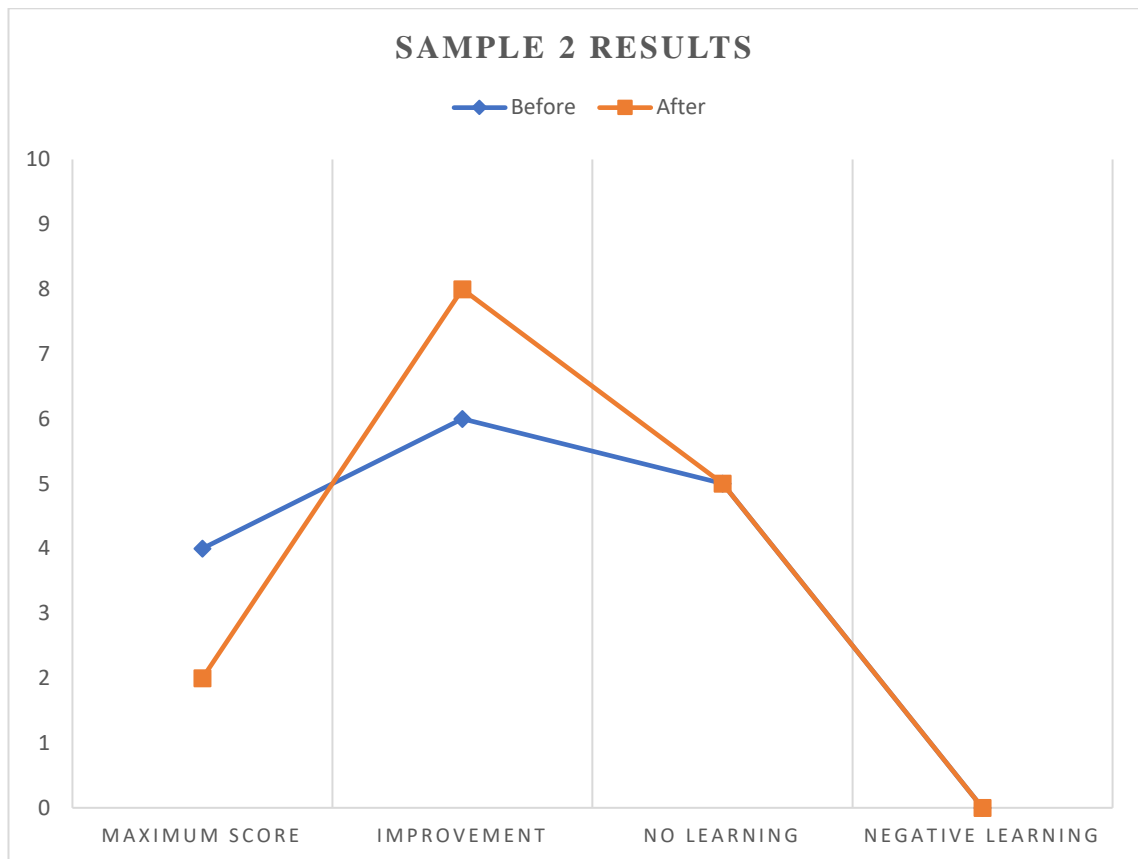


Figure 10 represents the difference between what sample 2 comprehension test results suggest and what the results tell us about the participants' performance once the qualitative data has been integrated. As Figure 10 illustrates, sample 2 results report 40% (n=6) of 'improvement', 33% (n=5) of 'no learning' and the rest of the participants (27%; n=4) having obtained a maximum score. Among the 'no learning' responses, three show similar causes as the ones identified in sample 1 responses, namely the participants' misuse of the Speaker B's face to consolidate a wrong interpretation, and the noticing of Speaker B's head shake without using it to challenge their initial interpretation. The other two 'no learning' responses seem to confirm their overreliance on linguistic input, the conceptual meaning of 'was' as a positive answer and their reluctance to challenge L1-established rules. This suggests that increased attention to prosodic pointing may not necessarily enhance their ability to use the noticed cues in the inferential process. Half of the 'improved' responses (20%; n=3) used the speaker's face to go from giving a wrong answer (at stage 1) to the right interpretation (at stage 2). What is worth noting is that two of the 'maximum score'

participants and four of the ones showing ‘improvement’ seem to have used prosodically-cued pointing applied to ‘was’ (i.e. \ was) to either confirm that the action described is a past action or change their mind about their interpretation. This again shows that ‘maximum score’ participants have improved their interpretive abilities between stage 1 and stage 2 by using paralinguistic cues despite what the quantitative results seem to suggest. The reason for some participants (n=6) to have noticed prosodically-cued pointing applied to ‘was’ at stage 2 but not at stage 1 will be discussed in Chapter Seven as it may indicate that visual cues play a part in making prosodic cues more accessible to the L2 hearer.

Figure 11 Sample 3 results: before and after integrating qualitative data

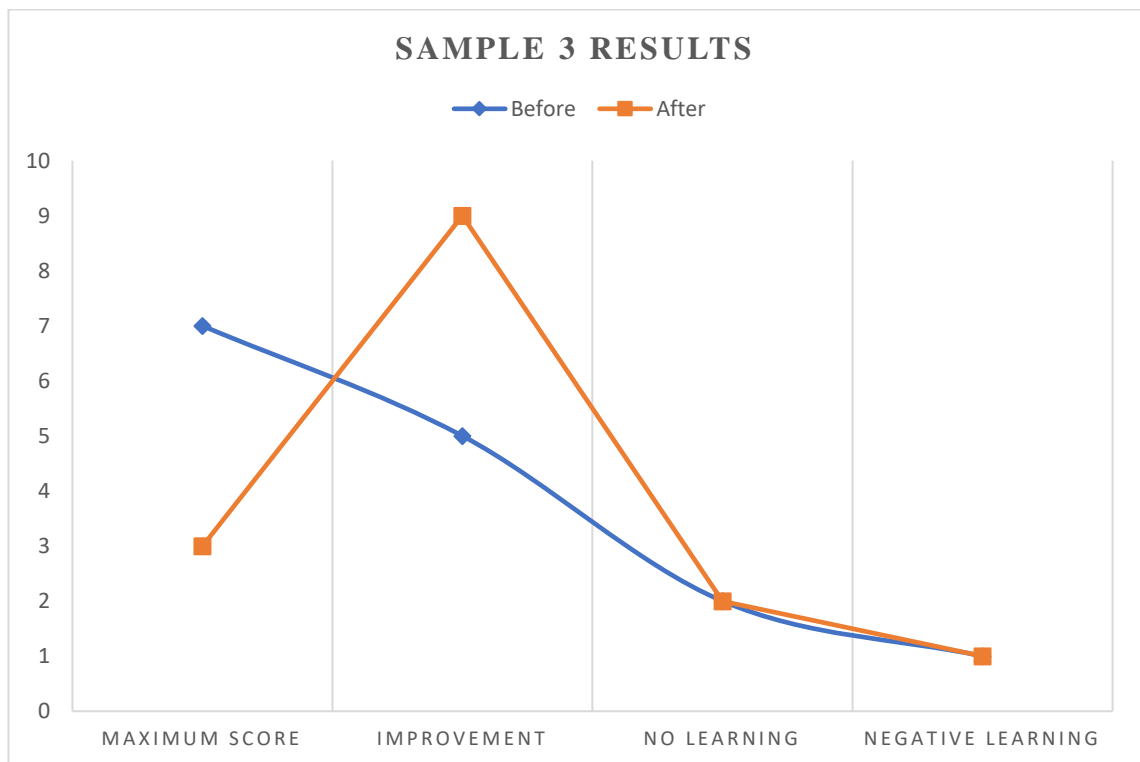


Figure 11 below represents the difference between what sample 3 comprehension test results suggest and what the results tell us about the participants’ performance once the qualitative data has been integrated. As illustrated by Figure 11, sample 3 responses probably offer the most interesting results once convergence of the quantitative and qualitative findings has been done, for the following reasons. Sample 3 results report 47% (n=7) of participants with a ‘maximum score’, 33% (n=5) of participants showing ‘improvement’, 13% (n=2) of them showing ‘no learning’ and

7% (n=1) of them showing ‘negative learning’. Again, further investigation of what is behind the ‘maximum score’ responses reveal something else. Four of the seven ‘maximum score’ respondents had in fact improved between stage 1 and stage 2 with three of them having not only reached the intended interpretation but also having formulated an intention-based interpretation: ‘He thinks she’s right – agrees with her’ (Zendric). Five out of five participants showing ‘improvement’ have improved as a result of challenging their first interpretation and L1-established rule (e.g. ‘He wasn’t means ‘No’’): ‘No he wasn’t means ‘yes’ to her question’ (Bryan). As for the ‘no learning’ and ‘negative learning’ respondents, they did not challenge their first ‘relevant enough’ interpretation or decided to stick to L1-based assumptions: ‘If I agree I should say ‘yes’’ (Johnny), ‘He wasn’t there means ‘no’’ (Joyce). Making the qualitative and quantitative findings converge is particularly relevant to sample 3, as from adding the ‘maximum score’ respondents who have improved their abilities between stage 1 and stage 2 to the rest of the participants showing ‘improvement’, we reach 60% of ‘improvement’ between stages 1 and 2. Thus, so-called ‘maximum score’ participants may still have a way to go to get to the right interpretation, as he or she may further improve by reaching the intended interpretation at stage 2. This is particularly true of sample 3 where enquiring on the ‘maximum score’ responses allowed me to almost double the number of participants showing ‘improvement’ at stage 2. One additional point as regards questions 1, 2 and 3 is that the question asked in question 1 (i.e. ‘Was he at the party?’) differs from those asked in questions 2 and 3 (i.e. Is the answer yes or no?). My intuition is that changing the question in question 1 into ‘Is the answer yes or no?’ would have led the participants to use the speaker’s face to understand disagreement beyond his positive-sounding answer, rather than using it as evidence that John wasn’t at the party.

After convergence of results, we observe a steady progression from sample 1 to sample 3 with 27%, 53% and 60% of improvement between stage 1 and stage 2. This suggests that access to paralinguistic cues has helped the participants to fine-tune their interpretations. What convergence of results suggests is that the participants’ interpretive competence and epistemic vigilance may have developed even though comprehension test results do not show. This allows me to make a point: there is more to inferential comprehension than *comprehension*, and it may be best-suited to look at

the ‘evasive and thorny’ area that listening comprehension is (Padilla Cruz, 2013a, p. 130) from an L2 pragmatic competence perspective, and in doing so, focus on L2 hearers as interpreters and on developing their ability to evaluate their own comprehension. Access to the processes, routes and detours involved in adjusting their interpretive abilities therefore is as important as the assessment of their final comprehension.

The results therefore largely support the argument that the pragmatics-prosody interface needs to be inclusive of all paralinguistic cues if we are to look for ways of enhancing L2 hearers’ interpretive abilities as part of developing their pragmatic competence. While the intervention’s outcomes at this stage seem to indicate the benefit of having access to prosodic pointing, the qualitative results have also shown that the participants had misused or not used the noticed contextual cues as input for further inferential processes, which often resulted in their failing to select and reach the intended interpretation. One suggested explanation, based on the qualitative data, is the participants’ reluctance to move away from established rules (i.e. ‘was’ means ‘yes’) which prevent them from challenging their initial interpretation even after noticing the cue that presumes of extra pragmatic effects (i.e. the speaker’s face expressing ‘no’). The results therefore show that having more cues to manipulate in the interpretation process does not automatically translate into enhanced comprehension, at least not after one go. It may remain difficult for learners to recognise the input that will lead them to optimal relevance. Therefore, one important facet of teaching inferential abilities in L2 hearers is to teach them to recognise cues that presume of extra cognitive effects and justify the extra processing effort. What is positive overall, however, is that access to more contextual cues does generate more noticing and more complex interpretive paths, and although some of them are not pursued, are aborted or are not fully exploited, the sort of questioning that epistemic vigilance involves is present.

Thus, this strongly suggests that the development of L2 pragmatic competence, and epistemic vigilance in particular, happens over and, more importantly, through time. It is acquired through repeated and prolonged exposure and opportunities of having one’s own interpretation challenged. This conclusion may well indicate that awareness

and competence overlap more than we think, and that, in the context of developing L2 epistemic vigilance as part of becoming pragmatically competent, pragmatic awareness comes as an integral part of pragmatic competence. Being aware that paying attention to the speaker's ostensive paralinguistic cues may be rewarding and worth the processing effort is part of the hearer's pragmatic competence. Building on this awareness will allow Chinese L2 learners to become pragmatically competent as L2 hearers. This is in line with Ifantidou's (2014) definition of pragmatic competence as presupposing pragmatic awareness. However, pragmatic awareness as defined by Ifantidou also entails noticing how cues realise their pragmatic effects. The above results suggest that noticing the cues is not always sufficient to arrive at the right interpretation in terms of their pragmatic functions. Speaker cues need to be noticed as ostensive to more likely be used in the intended way and in a way reflective of the speaker's intentions. This idea is in line with the principle of ostensive-inferential communication that the speaker's contextual cues need to be not only noticed but also recognised as ostensive to be used as input to inferential processes and understood in relation to the speaker's intentions. It also, as a consequence, supports the argument for the Noticing-as-Ostensive (NaO) model. Attentional abilities do not only involve noticing speaker contextual cues but, more importantly, they involve noticing these cues as being ostensively produced and intended for use in the inferential part of the interpretive work. It is suggested that it is all the more important in the context of L2 hearers working towards enhanced pragmatic competence.

It is crucial to note that, according to relevance theory, ostensive cues can be recognised as ostensive even when the hearer is overhearing a conversation and is not the direct recipient of the cues. An overhearer recognises behaviour as ostensive, even if it is not ostensively directed towards him. He can witness two people talking and know they are engaged in ostensive behaviour even if the ostensive behaviour is not directed at him. As a hearer, I can put myself in the interlocutor's mental shoes whether I am one of the interlocutors or not.

Yet, it is worth asking whether direct access to the speaker's ostensive cues and a direct role played in the interactive act seem to be facilitating conditions for the L2 hearer to engage as the interpreter of these cues. Stage 1 and 2 tasks may present

limitations which may explain why recognition and use of ostensive cues remains difficult even at stage 2. These limitations and those of classroom settings in general are that the participant/L2 learner is not engaged in a discussion as the direct addressee and recipient of the speaker's ostensive cues. The above results reflect the participants' competence as external interpreters, or overhearers, and it is suggested that this may have bearings on their scores. It more generally prevents and discourages L2 learners from listening in an active way. It is presumed that an L2 hearer will more likely capture ostension and make optimal use of the noticed cues if he is engaged as one of the interlocutors and as the speaker's direct social partner. It is speculated that direct access to ostensive cues, produced to be picked out by the L2 hearer's attention and used by the L2 hearer in the interpretive work would result in increased use of attended cues in the inferential process, increased reference to the speaker's intentions and intention-based interpretations.

Results from stage 2 post-recall activities are expected to shed light on the validity of this presumption. The two post-recall activities, designed to raise the participants' awareness of the physicality of prosodic pointing, involved a direct interaction between me and the participant. The nature of the second activity especially allowed me to assess the participants' inferential understanding when the participant interacts with another speaker as the interpreter of that speaker's intentions. The activity involved a scripted exchange between the participant/speaker 1 and me/speaker 2 based on a photo of Guess Who character Eric, who wears a hat:

Speaker 1: Has Eric got a hat on? Speaker 2: He has. Speaker 1: Eric hasn't got a hat on. Speaker 2: He \ has. (With a nod and a frown)
--

The participant was then asked to explain the difference between speaker 2's two different answers. The answers show not only the participants' understanding of the difference but intention-based explanations too, as Table 5 illustrates:

Table 5 Main participants' intention-based explanations in post-recall activity

Participants ³¹	Explanations ('I' may be used to refer to the speaker or the hearer) A fall (\) indicates the participant's use of stress
Skylar	Stronger stress on 'has'; I try to disagree with you.
Bill	I correct your mistake, so I stress and add more face expression.
Cicy	'Has' is more stressed; because my view is not correct, you correct it.
Eason	'\ Has'; want to disagree.
Li	Louder voice on 'has'; it is wrong, so I correct it.
Kevin	'\ No, he \ has' means he has got a hat on.
Danica	Use more accent to show that it is a different view from the question.
Joyce	More accent on 'has' to deny.
Mengran	'Has' is louder to correct 'hasn't'. 'Yes, he has' means 'No, he has'.
Zendric	'Has' is up; I want you to pay attention because you think he hasn't. I try to make you believe what I say.
Johnny	Louder on 'has' to change the wrong information into the right information.
Yuyue	Use accent to correct answer; no need to say yes/no, use 'he \ has' instead.
Shirley	I think he hasn't, but you say he \ has (+face).
Ruiping	I say it louder to identify that I am right.
Bryan	Stronger accent is used to make you pay attention to it, because you are wrong, and I need to fix it.

Table 5 shows that main participants almost systematically explained the difference between the two answers in terms of speaker 2's intentions in answering 'He \ has' with a nod and frown, e.g. 'want to disagree', 'to deny', 'to make you believe', 'to disagree with you', 'to correct'. It is also worth noting that their intention-oriented interpretations are in line with their noticing of the stressed form '\ has', e.g. 'stronger accent used to make you pay attention', 'I say it louder to identify that I am right',

³¹ As notified in Chapter Five, the 15th participant was not taken into account in the pre-/post-test between-group assessment of the intervention's impact because he was absent on the post-test day. He had, however, completed the intervention sessions.

'louder on 'has' to change the wrong information', 'has' is up. I want you to pay attention', 'has is louder to correct 'hasn't', 'more accent to show a different view', 'more accent on 'has' to deny'. It can also be seen that their recognition of an ostensive behaviour is sometimes explicitly reported in the data, for example by Bill, Danica, Zendric, and Bryan. Interestingly, no participants reported confusion over the stressed form '\ has', being positive, and speaker 2's face that 'disagrees'. Only two participants (Kevin and Shirley) seemed to not have gone as far as inferring that speaker 2 disagreed.

The above results suggest that, for ostensive cues to be noticed as ostensive and used as input to inferential processes by the L2 interpreter, they would have to be intended for them and produced for their attention to pick out the stimuli, at least in the context of developing awareness of the pragmatic functions of prosodic pointing. This means that instruction that aims to engage Chinese L2 hearers in intention-based communicative activities would hold a better chance of enhancing L2 hearers' inferential abilities if they involved input-and-interaction activities. Such activities would also provide them with opportunities for receiving negative feedback and negotiating meaning, which, in turn, can encourage them to challenge their initial interpretation and fine-tune their L2 epistemic vigilance. This point will be further developed and discussed as part of the limitations of the study, in Chapter Seven.

6.3.1.2 Second supporting argument for using prosodic pointing

The results after convergence of quantitative and qualitative data suggested that, while giving the participants more cues to play with may not result in them necessarily finding an easy way to the intended interpretation, it may help them challenge their first interpretations and thereby develop their epistemic vigilance. Prompting expectations of different effects, which justify extra processing effort can cause L2 interpreters to develop their pragmatic competence. This reflects one way in which exposure to prosodic pointing has been shown to be effective, and it provides one supporting reason for the refinement of the pragmatics-prosody interface into a more inclusive one.

Exposure to prosodic pointing was seen to help enhance the main participants' pragmatic competence another way. The participants were asked whether they had perceived prosodically-cued pointing or what I referred to as 'louder' words at stage 1, then at stage 2. The quantitative data this time seemed to indicate that access to prosodic pointing applied to pronouns (e.g. √ you) helped respondents in accessing and using prosodically-cued pointing in the inference of speaker meaning. Access to prosodic pointing (at stage 2) fostered not only the participants' attentional focus on 'you', but it also seemed to enable them to understand 'you' as opposed to 'me' or any other alternatives, as the data below shows:

Examples of qualitative data that shows their understanding: 'Would √ you like one – it is your preference (hand pointing)'; 'Would √ you' – same question but the difference is 'you'/'me'.

Figure 12 below shows the number of main group respondents noticing prosodically-cued pointing on the pronoun 'you' (i.e. √ you) when exposed to prosodically-cued pointing at stage 1 and when exposed to prosodic pointing at stage 2.

Figure 12 Main group respondents noticing prosodically-cued pointing at stages 1 and 2

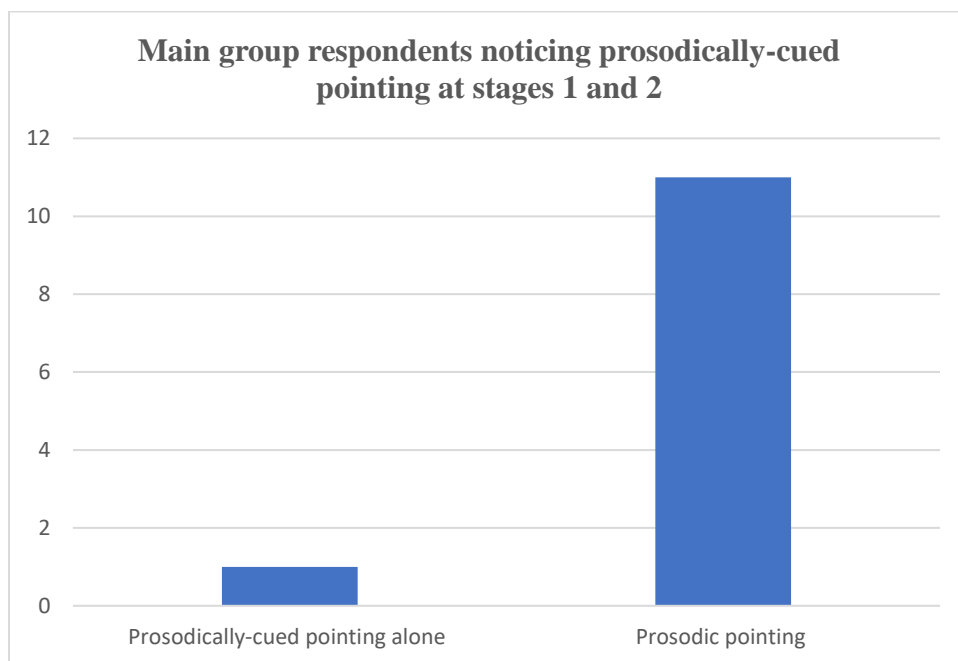


Figure 12 shows that only one participant noticed the pronoun ‘you’ as being accented when accessing prosodically-cued pointing alone at stage 1, while 11 participants noticed it when exposed to prosodic pointing at stage 2. The participants noticing the accenting of the pronoun ‘you’ at stage 2 not only noticed it as opposed to ‘I’, but they also noticed the pragmatic function realised through its accenting, namely to return a question. The participants also seem to have noticed ‘∇ you’ in interaction with hand and chin pointing. This suggests that gestural pointing may have helped participants access prosodically-cued pointing and that in the interpretation of multimodal phenomena such as prosodic pointing, some modalities (i.e. gestural) can affect the availability of others (i.e. prosodic). It is important to note that, in this particular case, all modalities were pointing in the same direction, which must have prevented participants from getting confused over seemingly disagreeing modalities representing different parts of the same message. Prosodic pointing applied to a pronoun may also be less subject to misinterpretation compared to prosodic pointing applied to a verb form that seems to agree when in fact is used to disagree.

By focusing on stages 1 and 2 this section has shown that the argument for using prosodic pointing as a multimodal phenomenon in an instructed L2 pragmatics acquisition study concerned with the development of L2 hearers’ pragmatic competence is primarily based on these two different interactions between prosodically-cued pointing (i.e. contrastive stress) and gestural pointing (head movement, bodily actions, facial modifications). One is integrative, the second paralleled, and both have been shown to help L2 hearers develop their epistemic vigilance and pragmatic competence in their own way. The next section focuses more on the impact of stage 2 on the participants’ pragmatic awareness and shows that stage 2 has contributed to the effectiveness of the intervention in raising the participants’ pragmatic and metapragmatic awareness. This constitutes a third argument supporting the beneficial effect of exposure to prosodic pointing.

6.3.1.3 Third supporting argument for using prosodic pointing

Results from stage 2 post-recall activities reveal evidence of raised awareness and positive effects of raising awareness and noticing the gap in preventing interlanguage fossilisation. What generally emerged from the participants as they were exposed to the recall and post-recall tasks provides some evidence that the tasks were doing what they were designed to do:

Evidence of the participants noticing (1) the gap between the output they generated and the input they were exposed to in their reaction to the researcher's response: 'OK' and/or a nod, as if to say 'I see what you did there.'

Evidence of the participants noticing (2) the gap between the modes of communication used in the input and those they would otherwise rely on and pay attention to: 'First time I pay attention to head movement and nodding.'

Evidence of the participants noticing (3) the gap between what is possible in Chinese and what is possible in English: 'In Chinese, you need to deny it first: 'No, he is.', 'No, he hasn't' means 'no'. If you want to agree, you say 'Yes, he hasn't'.

Evidence of the participants noticing (4) the gap between the type of instruction they had been exposed to in their home country and the instruction they were receiving as part of the study (i.e. the instruction being tested): 'I am not ready to use my face.'

Evidence of the participants noticing (5) the implications of the input for their future learning and evidence of metacognition, which gives me good reasons to believe that the input is likely to become intake and that the participants' current knowledge (at stage 2) could translate into learning strategies: 'If I know that, I can learn easier.'

In the first post-recall activity, 12 out of 15 participants used prosodic pointing in their second attempt at answering the question after they were exposed to the input. This shows that 80% of the participants had converted the input into intake and that the

post-recall activity was rather effective in making the participants notice the input and the gap between the input and their first output. It is worth noting that this may provide evidence of the effectiveness of the Noticing-as-Ostensive (NaO) hypothesis at a different level: the instruction level. This is in line with the literature on the role of relevance and ostension in L2 instruction (Jodłowiec, 2010). Noticing the input as being ostensively produced by the instructor and evidence of their intention to point a form out may determine whether or not the form is noticed and the input converted into intake. Further confirmation of the effect of stage 2 recall and post-recall activities in raising participants' awareness of the physicality and pragmatic function of prosodic pointing was found in the participants' descriptions of what they thought stage 2 of the intervention was about and what they thought they had learned at stage 2 based on both stages 1 and 2. Thematic Analysis revealed three themes and two sub-themes:³²

<p>Theme 1: importance of having access to visual cues as well as acoustic cues as opposed to acoustic cues only (i.e. supporting exposure to prosodic pointing).</p> <p><i>Sub-theme 1:</i> The 'more and better' argument.</p> <p><i>Sub-theme 2:</i> The interaction argument: prosody and gesture/facial expression interact and bodily actions can help to produce contrastive stress.</p> <p>Theme 2: implications of prosodic pointing for pragmatic and intention-oriented understanding.</p> <p>Theme 3: evidence of metacognition / metacognitive strategies, which are likely to translate into developing strategies as hearers and speakers and help in preventing L2 fossilisation.</p>

The themes and illustrative quotes show that the participants have generally understood the point of using prosodic pointing both as a hearer and as a speaker. While exposure to prosodic pointing is therefore seen as being beneficial to almost all participants (14 out of 15), one participant provides a piece of counter evidence in reporting that she did not see why using gesture when listening was useful. It can still

³² For illustrative participants' quotes, see Appendix Seven.

be confidently said that the participants' stage 2 summaries show evidence of the participants' metapragmatic awareness, which strongly suggests that stage 2 was effective in raising their awareness of the pragmatic function of prosodic pointing, and of the importance of multimodality as opposed to prosody alone. Further validation of what the above results seem to be telling us about the impact of stage 2 may be found in (1) the participants' descriptions of change in strategies reported in section 6.1.1 on page 169 and (2) their descriptions of the role of intonation presented in section 6.1.7 on page 184. If the three sources of data are consistent, it will more strongly suggest that not only their awareness was raised and that the intervention was effective in raising their awareness, but also and more importantly that stage 2 of the intervention has largely contributed to its effectiveness. I found that (1) the participants' post-test descriptions of change in their own strategies as L2 hearers and speakers and (2) the participants' post-test responses to the sentence-completion item on the role of intonation are in line with (3) the participants' stage 2 summaries. If we look across the three sources of qualitative data, we find not only overlapping data that provides evidence of their awareness of the pragmatic function of intonation and/or gesture, but very close descriptions too, as shown in Table 6 below.

Table 6: Convergence between sources

<p>(1) Have your listening and speaking strategies changed over the past months?</p> <p>My strategies have changed in that I: ‘pay more attention to b-l and intonation’, ‘listen for the intonation and use it to understand the meaning’, ‘try to use intonation to let my words become more clear’, ‘stress the words to express my meaning’, ‘use intonation and b-l for others to focus on what I say’, ‘I nod to show the emphasis.’</p>
<p>(2) The role of intonation in English is to...</p> <p>Intonation is used: ‘to attract listener attention, ‘to let people who are listening know meaning of words’, ‘to help us identify important words’, ‘to let other know where she/he should pay attention to’, ‘together with b-l to explain the main idea’, ‘to emphasise important information and express your meaning’, ‘to make meaning clear’, ‘to highlight and catch key information’, ‘to focus on key words’, ‘to correct answers.’</p>
<p>(3) What was stage 2 about and what have you learned by the end of stage 2?</p> <p>At stage 2, I know that prosodic pointing is used: ‘to help understand meaning’, ‘to help me understand others what they really want to tell me’, ‘to let people understand your meaning’, ‘to help others understand you’, ‘make your message clear’, ‘to mean ‘yes’ or ‘no’, ‘to correct the meaning’, ‘to better focus and understand’, ‘to emphasise my questioning.’</p>

As shown in Table 6, the content of all three sources overlaps: the words and particularly the verbs used by participants to report on what they have learned from being exposed to prosodic pointing at stage 2 align with those used to describe the role of intonation and change in their strategies in the post-test questionnaires. There is a clear convergence between the participants’ awareness of the role of prosodic pointing, that of intonation and the reported changes in their strategies. This convergence strongly suggests that the changes in their strategies and their raised pragmatic awareness likely come as a result of the intervention and that stage 2 has largely contributed to making this happen.

This conclusion constitutes a third and crucial argument for using prosodic pointing in L2 pragmatics instruction. Stage 2 of the intervention must have played a major role in raising participants’ awareness of the pragmatic role of contrastive stress in interaction with co-pointing behaviour, and in enhancing their pragmatic competence

as L2 hearers. In what ways do the results show evidence of the participants developing their pragmatic competence? All three sources, as Table 6 illustrates, show evidence of the participants' orientation to one's and others' ostensive behaviour: 'let other know', 'help us identify', 'for others to focus on', 'attract attention', 'help me understand what they really want to tell me', 'let other know where she/he should pay attention to', 'to show emphasis', which reflects their awareness of their role as an L2 hearer as being in relation to that of the speaker and vice versa. The data also reflects a marked focus on one's and one's interlocutor's intentions: 'what they really want to tell me', 'express your meaning', 'my message', 'to focus on what I say'. What this shows is not only that relevance-based instruction seems to be effective in encouraging L2 hearers to think in terms of speaker communicative intentions, but also and perhaps primarily that exposure to prosodic pointing contributes massively to their noticing of speaker's ostensive behaviour and how it relates to their intentions. It seems to support the idea that instruction using prosodic pointing leads to the development of pragmatic behaviour as L2 hearers. Because of its natural ostensiveness, prosodic pointing is 'special' and a special tool for enhancing L2 hearers' pragmatic competence.

6.4 The longer-term effects of the intervention on the main group: delayed post-test results

The delayed post-test questionnaire assessed whether the intervention had longer-term effects on the main participants' pragmatic competence; that is, whether the effects of the intervention were still visible after a prolonged period of time and whether it could be said that the intervention resulted in learning. Since a prolonged period of time assumes a prolonged period of immersion in the UK and prolonged exposure to the target language (in principle), the delayed post-test assessment also investigated whether the intervention had more than lasting effects and whether the participants' pragmatic competence was found to have further improved. To this end, the SPSS Wilcoxon signed rank statistical test was used to determine whether the difference between the main participants' pre-test and delayed post-test scores was significant and whether the delayed post-test scores were higher than the immediate post-test ones.

6.4.1 Pre-test/delayed post-test difference: the main group’s awareness

Table 7: Hypothesis Test Summary – Main group’s long-term awareness

Null Hypothesis	Z / P-value	Decision
Z is less than -1.96, or greater than 1.96	-1.667 ^b	Reject the null hypothesis
The P-value is inferior to 0.05	0.048	Reject the null hypothesis

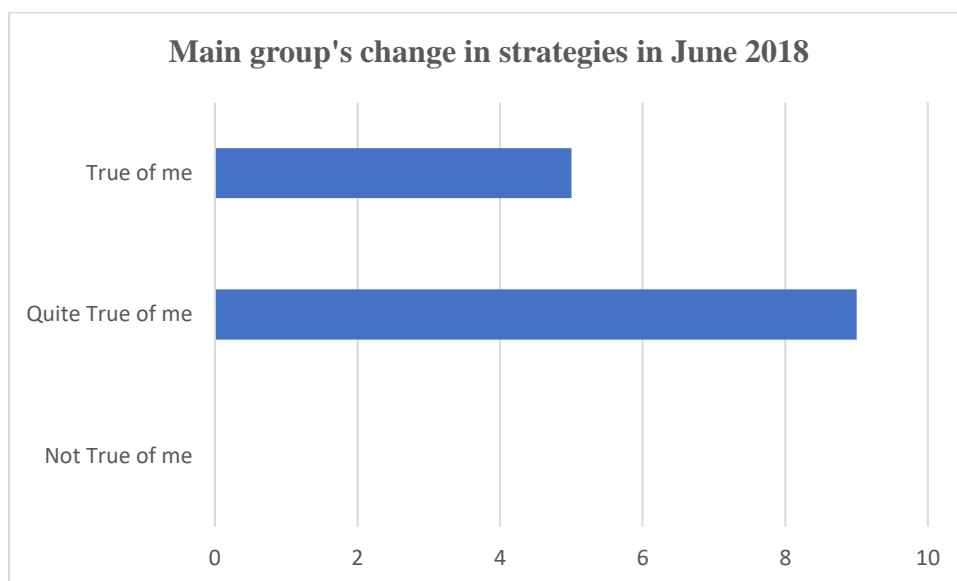
The significance level is 0.05

The P-value is 0.048 and is therefore inferior to 0.05 (alpha level). This means that the null hypothesis (H0) is rejected, the alternative hypothesis (H1) is accepted and the difference between the main group’s pre-test and delayed post-test scores remains significant. The above results constitute evidence that the intervention has had lasting effects on the participants’ pragmatic awareness. It does not show, however, that the participants’ pragmatic awareness has further improved, as the pre- and delayed post-test difference (P-value: 0.048<0.05) is less significant than the pre- and immediate post-test one (P-value: 0.004<0.05).

6.4.2 Strategies-related results

The responses to the Likert scale item pertaining to the participants’ development of strategies over the course of their academic year were investigated. Only 25% of participants – as opposed to 50% in the immediate post-test – confidently asserted to have seen their strategies change over the past year, as Figure 13 below shows.

Figure 13 Main group's rating of change in strategies in June 2018



Although the above scale item results seem to indicate that the participants' strategies have not developed as much in the course of their academic year as they have over the course of the summer, it may or may not accurately reflect the participants' development of strategies. The participants may have been less aware of their learning as they went from being a language learner involved in research aiming at enhancing their language ability, to studying in the Schools of Business, Management, Tourism or Engineering. The learning context was certainly different and there might have been fewer opportunities for them to develop metacognitive thoughts and awareness of their learning strategies. To find out whether there was a convergence between the participants' rating of strategy development shown in Figure 13 and their descriptions of strategies, their qualitative responses were analysed.

The qualitative responses to the open-ended item were expected to shed further light on the above quantitative results, by potentially validating that the participants have not developed their strategies further and possibly providing reasons why. While participants reported on both their listening and speaking strategies in the immediate post-test questionnaire, they seemed to only report on their listening strategies in the delayed one. The delayed post-test responses were distinctively listening-oriented and did not reflect the balance between hearer and speaker found in the immediate post-test ones. In the delayed post-test responses, speaking strategies were mentioned only

to report that participants 'improved a little' or 'need more practice'. Although the research that participants had taken part in focused primarily on comprehension, and their ability to evaluate their comprehension, the immediate post-test responses reflected their listening and speaking strategies developing in parallel, possibly because the relevance-based intervention and the context in which the research was set required the participants to speak more. This imbalance between listening and speaking strategy development found in the delayed post-test questionnaires seems to be in line with the participants' qualitative responses to the added questions, i.e. the questions relating to the experiment itself and to the extent to which it helped them improve their listening and speaking skills. While all of them thought their listening had improved, only 50% of them thought their speaking had equally improved. In their answers to the added questions, 50% of participants reported having not developed their speaking skills as much as their listening skills, and having spoken less English over the course of their academic year than they had spoken during their time on the summer course in the summer of 2017.

Therefore, there is a convergence between the participants' description of strategies, rating of change in strategies and their qualitative answers to the added questions: the experiment has not helped improve their speaking as well as their listening, and their speaking strategies have not improved as well as their listening strategies over the past year. It is suspected that the above results may be caused by the level of exposure to the target language that the participants gained over the past year.

6.4.3 Exposure-related results

Figure 14 Main group's rating of exposure to the target language in June 2018

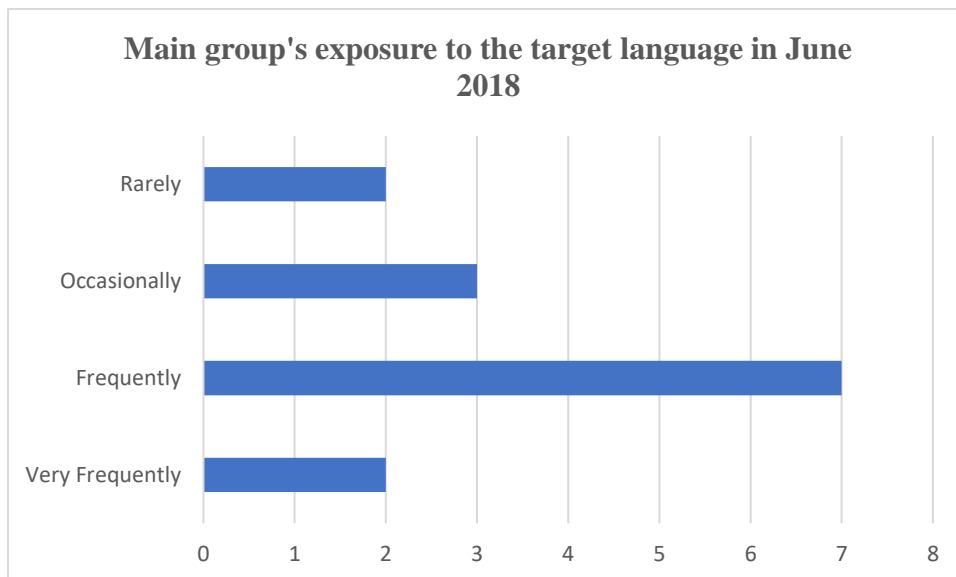


Figure 14 shows that participants' rating of exposure to the target language varies greatly from participants seeking and/or receiving less to participants seeking and/or receiving more exposure. The delayed post-test results show more variation in the participants' exposure to the target language than the immediate post-test ones. One possible interpretation of the results is that the more varied answers reflect that the students were no longer receiving the same amount of class time and exposure. As a consequence, there are as many participants being rarely exposed to the target language as there are very frequently exposed to it. While the intensive summer course and the research participation ensured that they maintain a regular contact time and exposure to the target language, it might have varied greatly from one student to another in the course of their academic year. This is what the results suggest. The results seem to be in line with the feedback that pre-sessional tutors and course leaders generally receive from students at the end of their academic year and stay in the UK. It seems that their time on the summer course is when they receive the most L2 input, the most exposure to the target language and when they most speak English, the reason for this being that the summer course is an intensive English course. The rest of the year, most Chinese students share accommodation with other Chinese students and

they are likely to study the same subjects and be in the same lectures and seminars, which often dissuades them from looking for opportunities to mingle with English L1 (or L2) speakers. The results are nevertheless meaningful as they suggest that the intervention was not sufficiently effective in making participants seek more exposure nor in making them be actively ‘listening to learn’.

6.4.4 Pre-test/delayed post-test difference: the main group’s competence

Table 8: Hypothesis Test Summary – Main group’s long-term competence

Null Hypothesis	Z / P-value	Decision
Z is less than -1.96, or greater than 1.96	-2.295 ^b	Reject the null hypothesis
The P-value is superior to or equals 0.05	0.011	Reject the null hypothesis

The significance level is 0.05

The P-value is 0.011 and is therefore inferior to 0.05 (alpha level). This means that the null hypothesis (H0) is rejected, the alternative hypothesis (H1) is accepted and the difference between the main group participants’ pre-test and delayed post-test scores remains significant. The above results constitute evidence that the intervention has had lasting effects on the participants’ pragmatic competence. It does not show, however, that the participants’ pragmatic competence has further improved, as the pre- and delayed post-test difference (P-value: 0.011<0.05) is less significant than the pre- and immediate post-test difference (P-value: 0.007<0.05). The competence-related findings are in line with the awareness-related ones.

The two sets of statistical results show that both the difference between the main group's pre- and delayed post-test competence-related scores and the difference between their pre- and delayed post-test awareness-related scores are significant. The results therefore suggest that the intervention had longer-term effects as well as short-term effects on the main group's pragmatic awareness and competence. However, although the delayed post-test results provide evidence of the lasting effects of the intervention, they do not go as far as suggesting that the main group's awareness and competence have further developed over the course of their academic year. It seems that, although the intervention has had lasting effects, and the participants report that their listening strategies have developed over the past year, they do not seem to have been actively 'listening to learn'. As stated in Chapter Five, the intervention sought to develop the participants' pragmatic behaviour as an L2 hearer so that they gain more out of their exposure to the target language and further develop their comprehension and production over time. This, again, is subject to the quantity and quality of exposure received. The development of strategies as reported in the immediate post-test results suggested that the participants' development of listening strategies had impacted their speaking strategies. However, the delayed post-test results suggest that the participants have not developed their speaking as much as their listening over the months following the intervention. One way of interpreting this may be that the development reported by the participants in the delayed post-test questionnaire does not involve mind-reading activities carried out in interaction. It may also be interpreted as a consequence of having engaged in listening activities, such as listening to lectures, more than in speaking activities.

6.5 Conclusion

Chapter Six has provided evidence that exposing Chinese L2 hearers to prosodic pointing was effective in developing their pragmatic awareness, in fine-tuning their vigilance abilities, and so in enhancing their pragmatic competence. Chapter Seven discusses the findings in the light of the theoretical assumptions presented in Chapters Four and Six. Longer monitored exposure, multiple delayed post-tests as well as improved delayed assessment of the participants' epistemic vigilance and pragmatic competence are some of the suggestions for improvement offered in the discussion.

Chapter Seven

Discussion

7.0 Introduction

Chapter Seven discusses the validity of the hypothesis, the theoretical and practical implications of the findings and the overall suitability of the methodology. The implications of the results are discussed in consideration of the theoretical assumptions highlighted in Chapters Four and Six, namely the relevance of relevance theory for L2 pragmatic competence development, the development of epistemic vigilance as part and parcel of pragmatic competence, the relationship between awareness and competence, the special role of prosodic pointing and the multimodal argument, and the implications of exposure to prosodic pointing for Chinese L2 hearers. The limitations of the intervention will be considered, and suggestions for future improvement will be offered.

7.1 The study

The over-arching aim of the intervention study was to explore one particular way in which Chinese L2 hearers's awareness of the important role of speaker paralinguistic behaviour could be raised. The strategy chosen was to adopt a cognitive-pragmatic approach to instructed L2 oral comprehension informed by relevance theory and show how exposure to one type of paralinguistic behaviour – prosodic pointing – might contribute to the development of more sophisticated interpretive abilities. The development of such strategies would form evidence of improved pragmatic competence, and thereby address pragmatic problems of the kind identified by Padilla Cruz (2013a).

The intervention study not only assessed the effectiveness of the intervention in raising L2 hearers' pragmatic competence in the short and longer term, but it also explored *how* it happened: what exactly made it work, what it was in the input and in the method

of instruction that raised the participants' pragmatic and metapragmatic awareness and enhanced their pragmatic competence. My interest also lay in determining whether the intervention's impact and development of pragmatic competence manifest in the post-test results could be retraced and better understood from within the intervention. This would enable me to track the development of pragmatic and metapragmatic awareness and thereby discount the possibility of other factors having intervened and skewed the results. Through access to qualitative data and between-group comparison, it became possible to rule out most of the potential intervening factors, and this provides further support for the hypothesis that it is through exposure to prosodic pointing and the ostensive-inferential comprehension mechanisms that the main groups' pragmatic and metapragmatic awareness was raised, and pragmatic competence thereby enhanced.

The intervention was found to be effective in raising pragmatic awareness and enhancing pragmatic competence in the main participants. Effectiveness of instruction was revealed not only in a comparison of the main group's pre-intervention and post-intervention results, but was also further validated by results of the control group, which had completed both pre- and post-test assessments without having been exposed to the intervention. The triangulation design and the validity checks run both internally and externally warrant the robustness of the results and mean that conclusions as to the effectiveness of the intervention can be drawn with confidence. Exposing Chinese L2 hearers to prosodic pointing has had an impact at two levels. Exposure to prosodic pointing had an impact on both the main group's awareness-related growth and competence-related change, which means that the results validate the hypothesis according to which exposure to prosodic pointing can raise pragmatic awareness and enhance pragmatic competence in Chinese L2 hearers. The use of a mixed methods triangulation design has allowed for greater confidence in the results as pointed out above. More crucially, it has allowed for a deeper understanding of the big picture of the phenomenon observed.

While the use of a control group makes the questionnaire-based results more robust, it does not provide a full picture of the phenomenon under investigation (Hashemi, 2013, p. 207). It has tested and validated the hypothesis that exposure to prosodic pointing can raise pragmatic awareness and enhance pragmatic competence in Chinese L2

hearers. However, it does not provide further insights as to how. The discussion offered in the remaining sections of this chapter will report on the qualitative exploration of the processes involved in L2 hearers' pragmatic competence development. This exploration of qualitative responses and evidence of developmental processes within the intervention can shed new light on the effectiveness of the intervention, consolidate the current results and further validate the hypothesis. Crucially, the exploration of the qualitative findings can further demonstrate that the improvement in the main group's pragmatic competence shown in the post-test results is indeed an effect of their exposure to the relevance-based intervention. Also, it allows me to refine the five theoretical implications introduced in Chapter Four on page 119 and reiterated in Chapter Six on page 194. Those implications relate to:

The relevance of relevance theory for L2 pragmatic competence development (7.2.1)

The development of epistemic vigilance as part and parcel of pragmatic competence (7.2.2)

The relationship between awareness and competence (7.2.3)

The 'special' role of prosodic pointing and the multimodal argument (7.3)

The implications of exposure to prosodic pointing for Chinese L2 hearers (7.4)

7.2 Retracing pragmatic competence back to pragmatic awareness and metapragmatic awareness

7.2.1 The relevance of relevance theory to L2 pragmatic competence development: evidence of pragmatic awareness and metapragmatic awareness

Pragmatic competence development manifested itself in post-test results. The post-test scores of the main group were significantly higher than their pre-test scores. The improvement was characterised by improved accuracy both in the placement of contrastive stress and the pragmatic justification for it, as illustrated below:

Pre-test answer: “My name is Bond. James Bond.” Justification: ‘The key information is the name.’

Post-test answer: “My name is Bond. James Bond.” Justification: ‘His name is James Bond, but not other Bond.’

Access to qualitative, textual data was crucial in further determining whether those quantitative results were reflective of the relevance-based intervention. In other words, the qualitative data, obtained in the questionnaires and the input-and-recall sessions indicated that their pragmatic competence developed in the intended way and as corresponding closely to the relevance-oriented definitions provided in the thesis. Access to qualitative data was used to determine whether, as well as evidence of pragmatic competence, evidence of pragmatic awareness and metapragmatic awareness could be found. Evidence of pragmatic awareness and metapragmatic awareness would indicate that the results are in line with Ifantidou’s definition of pragmatic competence as presupposing both pragmatic awareness and metapragmatic awareness (2014). The qualitative data obtained in the questionnaires and in the input-and-recall sessions presented evidence of pragmatic awareness and metapragmatic awareness as defined in the thesis. I will first offer a reminder of those definitions, then give detail of the evidence found.

Pragmatic competence was defined in cognitive, relevance-theoretic terms as ostensive-inferential competence: as the hearer’s ability to attend to speaker ostensive behaviour and use it to infer the speaker’s intended interpretation or the optimally relevant interpretation. Pragmatic awareness was defined as the hearer’s alertness to speaker’s ostensive behaviours (e.g. paralinguistic cues) as cues to her intentions. At the same time, it is the hearer’s ability to critically reassess his interpretative route and discard a relevant enough interpretation for one that is more likely to have been intended by the speaker based on his noticing of contextual cues. Metapragmatic awareness was defined as the explicit linking between a cue as evidence of an intention and the intention itself, e.g. disagreement. We will see that defining pragmatic awareness in relation to epistemic vigilance adds more to the relation between awareness and competence and helps further explain how the former is part and parcel of the latter. The development of epistemic vigilance, as a type of vigilance mechanism

which safeguards the hearer from misinterpreting the speakers' meaning – or *hermeneutical vigilance* (Padilla Cruz, 2016b), is seen as part and parcel of pragmatic competence development.

Evidence of metapragmatic awareness was provided in a number of ways in the post-test questionnaires. Firstly, the participants' justification for the selected stress placement shows evidence of their ability to link stress to its pragmatic interpretation: 'His name is Bond, but not other Bond'. Secondly, in their descriptions of one role of intonation, the participants show their ability to link the highlighting of information and speaker intention: 'emphasise important information and express your meaning'. Thirdly, in their descriptions of strategies, the respondents reported pragmatic reasons for using intonation and/or body-language both as a hearer and as a speaker, e.g. 'to be clearer to others', 'to understand meaning', 'for others to focus on what I say'.

The evidence of metapragmatic awareness reflected in their newly developed abilities, also further reflect their developing pragmatic competence. The correspondence between the changes in their listening and speaking strategies reflects the development of ostensive-inferential competence. It shows their awareness of the balance between the speaker's use of ostensive cues and the hearer's inferential work. As a result, the reported changes in their strategies as L2 hearers had a direct impact on the reported changes in their strategies as L2 speakers. They do not only pay more attention to paralinguistic cues, but, as a consequence, they also make use of ostensive stimuli, i.e. intonation and gesture, to draw their interlocutor's attention, as illustrated by the participants' words below:

'to attract listener attention', 'to let people who are listening know meaning of words', 'help us identify important information', 'let other know where she/he should pay attention to', 'to be clearer to others', 'to understand meaning', 'for others to focus on what I say'.

When compared to the control group's responses to the same item, it is clear that participants without exposure to the intervention did not automatically comment of both their listening and speaking strategies, and, if they did, their strategies were by

no means corresponding. What the main participants' responses showed is a clear parallel between reported changes in their strategies as L2 speakers and reported changes in their strategies as L2 hearers: 'I pay more attention to intonation and body-language', 'I start to use intonation and gesture'. It showed the effect of the intervention, but more crucially, the effect of the relevance-based intervention, with the underlying idea that any speaker is a listener and all listeners are also speakers.

Evidence of metapragmatic awareness in the post-test questionnaires provides some evidence of pragmatic awareness, i.e. the hearer's alertness to the speaker's ostensive behaviours (e.g. paralinguistic communicative cues) as cues to the speaker's intended meaning. However, it falls short of showing the hearer's ability to critically reassess his comprehension and opt for a more sophisticated interpretative route. This is illustrated by the input-and-recall session data. The input-and-recall data provides further evidence of metapragmatic awareness and clear evidence of pragmatic awareness, in terms of the hearers' epistemic vigilance adjusting and L2-specific interpretive abilities developing.

7.2.2 Epistemic vigilance and pragmatic competence

The data collected during the two input-and-recall sessions provides evidence of the participants going from stopping at the first most accessible or 'low-cost' interpretation (at stage 1) to one that involves them challenging L1-established assumptions and reaching the intended interpretation (at stage 2). In the examples below, the participants have gone from formulating a wrong or relevant enough interpretation, at stage 1, to reaching an optimally or close to optimally relevant interpretation at stage 2:

Bryan: No = he wasn't. → No, he wasn't = 'yes' to her question.

Ruiping: No, meaning 'yes' he was there'. → No, he wasn't no means 'yes', he agrees.

Shirley: She was, so 'Yes'. → No – face = she wanted to but gave up.

Yuyue: Wasn't. → He \ was = meaning 'no'.

Zendric: Yes, he wasn't. → Yes = he thinks she's right – agrees with her.

The above results show evidence of L2 hearers taking different interpretive routes when exposed to prosodic pointing at stage 2 of the intervention. The participants seem to progress towards an accurate or more accurate interpretation. They move from adopting a naïve strategy to using the available cues as pointers to the intended interpretations. For example, Shirley attends to Speaker B's face and understand from it that 'she wanted to but gave up'. Similarly, Yuyue uses Speaker B's accenting of 'was' to conclude that Speaker B disagrees. Shirley and Yuyue are both participants having understood those ostensive paralinguistic behaviours as intention-cueing behaviours. These examples constitute clear evidence of the participants' metapragmatic awareness, and, although Bryan, Ruiping and Zendric do not explicitly link the cue to the intention, they seem to have benefited from their exposure to prosodic pointing as they improve their interpretation at stage 2. Further evidence of the participants linking cue(s) and intention at stage 2 is illustrated by the example responses below:

Cicy: She \ was. His face shows she did not succeed.

Mengran: He \ was. Looks surprised because she did not see him.

Bryan: She \ was. No.

Skylar: Face – not now, before.

The above responses show further evidence of the participants' alertness to those cues as evidence of intentions. Even when those cues are not explicitly mentioned, access to prosodic pointing seems to be effective in guiding them towards the optimal or intended interpretive route. They go further in terms of interpreting Speaker B's intentions: 'he agrees' (Ruiping), 'he thinks she's right' (Zendric). The results suggest that the participants that show improvement have developed cautious optimism through detection and appropriate use of ostensive behaviour. The results therefore suggest that those participants have adjusted their epistemic vigilance to 'the peculiarities of L2 communication' (Padilla Cruz, 2013a, p. 130). This is further illustrated by Bill, Kevin, Mengran, and Yuyue, who go from believing in a low-cost interpretation based on the L1-established assumptions that 'yes' or affirmation means agreement and 'no' or negation means disagreement to challenging those assumptions

based on the available cues. Epistemic vigilance in the L2 is adjusted and refined when the participants challenge those assumptions:

Bill: Yes. (stage 1) → No – face. It’s a secret. (stage 2)

Kevin: No. He says no. (stage 1) → Yes, he wasn’t. (stage 2)

Mengran: Yes. (stage 1) → She \ was. Before, not now. (stage 2)

Yuyue: Wasn’t. (stage 1) → He \ was = meaning ‘no’. (stage 2)

Qualitative evidence of metapragmatic awareness and pragmatic awareness was therefore found in the data collected via input-and-recall method and in the post-test questionnaires. Further evidence of pragmatic competence was also found in the post-test questionnaires. The findings seem to strongly suggest that those processes, i.e. pragmatic competence, pragmatic awareness and metapragmatic awareness, develop in parallel. In that sense, they support Ifantidou’s definition of pragmatic competence as presupposing pragmatic awareness and metapragmatic awareness (2014). The observed development in epistemic vigilance is also in line with its definition as being part and parcel of pragmatic competence (Padilla Cruz, 2013a; Ifantidou, 2014, 2016). On the basis of these findings, there is, as well as direct quantitative evidence of enhanced pragmatic competence, less direct evidence of pragmatic competence. If pragmatic awareness and metapragmatic awareness are both components of pragmatic competence, evidence of both pragmatic and metapragmatic awareness reinforces the validity of the results indicating an increase in the main participants’ pragmatic competence. Thus, not only access to those developmental processes has allowed me to gather evidence of metapragmatic awareness and developing epistemic vigilance at stage 2 of the intervention, but these also suggest pragmatic competence development (Ifantidou, 2014), thereby consolidating the questionnaire-based results. In that sense, the exploration of developmental processes strongly suggests that the intervention must be the cause for variation in the main participants’ pragmatic competence.

It is therefore the introspection-based data, within the intervention, that provided me with access to developmental processes and evidence of developing metapragmatic awareness and pragmatic awareness. It is the questionnaire-based qualitative data that consolidated the questionnaire-based quantitative results, and the qualitative data from

within the intervention (i.e. the introspection-based data) that further validated both quantitative and qualitative questionnaire-based results. This shows that the triangulation design was very effective in the sense that the qualitative data allowed me to confirm the existence of pragmatic competence development as defined within the relevance-theoretic framework for pragmatic competence assessment, i.e. the NaO model. The triangulation design allowed me to confirm the existence of metapragmatic and pragmatic awareness development as an indicator of pragmatic competence development. These results have important methodological implications. Not only do they show that Ifantidou's original framework can be applied to the teaching and assessment of oral inferential comprehension based on access to and interpretation of multimodal input, but they also and importantly show that a triangulation design can be applied more broadly in studies using relevance theory. A concurrent triangulation design can be effective for studies using relevance theory, and in particular those concerned with language development within the relevance-theoretic framework, as it accommodates an interest in both the hearer's reasoning, interpretive processes and the conclusion he arrives at, i.e. his interpretation, and in how the two may coincide. It can tell us more about the hearer's actual understanding and how he has reached his conclusion or how and why misinterpretation has occurred, as illustrated in the present study. This bears important implications for further studies and enhances the contribution of the present work to empirical research within relevance theory.

Evidence that suggests that epistemic vigilance is part and parcel of pragmatic competence, thereby coinciding with the literature (Padilla Cruz, 2013a; Ifantidou, 2014, 2016), has enabled me to refine my account of the relationship between awareness and competence. It has shed further light on the ever-developing nature of pragmatic awareness and its intrinsic link to pragmatic competence.

7.2.3 *From awareness to competence: refining the relationship between awareness and competence*

The results have allowed me to refine and clarify my account of the relationship between awareness and competence. According to my hypothesis, presented in Chapter Four on page 118:

Exposure to prosodic pointing, as ostensive multimodal input, plays an important role in setting the stage for Chinese L2 hearers' recognition of relevance, raising their pragmatic and metapragmatic awareness and improving their pragmatic competence.

The hypothesis was largely validated by clear evidence of the main group's pragmatic awareness, metapragmatic awareness and pragmatic competence development found post-intervention and during the intervention itself.

The outcomes of the intervention study provide further support to Ifantidou's definition of pragmatic competence (2014), in that pragmatic awareness and metapragmatic awareness have shown to be an accurate indication of pragmatic competence. Evidence shows that an increase in the main group's pragmatic awareness not only suggests a growth in competence, but it also and crucially consolidates the results according to which there has been an improvement in the main participants' pragmatic competence. In the same way, evidence that the control group's awareness did not significantly develop not only suggests that the control group's pragmatic competence did not significantly improve; it also further consolidates the results according to which the control group's pragmatic competence did not increase significantly between pre- and post-test questionnaire administration. In supporting Ifantidou's framework for pragmatic competence assessment (2014), the outcomes also support the idea that her framework can be adapted to the assessment of L2 oral comprehension guided by paralinguistic cues to ostension, thereby making my contribution to the field visible.

From pragmatic (and metapragmatic) awareness to pragmatic competence as used in the title of the thesis reflects the longitudinal nature of the study (as seen in Chapter Five) in that evidence of awareness is found prior to evidence of pragmatic competence. Awareness indicates competence. However, from pragmatic awareness to pragmatic competence does not suppose that there is a correlation between awareness and competence. The study did not involve testing for a correlation between awareness- and competence-related scores, and while a causal link can be speculated, it cannot be strongly supported. Awareness-related growth is seen as part and parcel

of competence-related change and therefore as further evidence of the main participants having developed their pragmatic competence rather than its causal factor. The title of the thesis is to be understood as from evidence of awareness (both metapragmatic and pragmatic) to manifestation of competence. The title of the thesis hence reflects the adaptation of Ifantidou's framework to L2 oral comprehension guided by paralinguistic cues to ostension.

The results show that competence can be defined in terms of awareness and, as such, it shares much of the nature of awareness. Pragmatic competence as an L2 interpreter/hearer can be described as an active and ever developing competence. As modules of the mind dedicated to on-line comprehension, the relevance-theoretic comprehension heuristic and epistemic vigilance mechanism, although genetically equipped, are subject to constant change and updating on the bumpy road to comprehension (Padilla Cruz, 2013a). This is particularly true of pragmatic competence as an L2 hearer. Pragmatic competence as an L2 hearer is not fixed, but rather is constantly challenged and reinforced. As pointed out in Chapter Three, there is not a procedure that is activated each and every time prosodic pointing is used by a speaker and read by the hearer. Therefore, and as the results show, every new exposure to prosodic pointing put the hearer's competence to the test. In that sense, competence can be described as the active and progressive fine tuning of the hearers' pragmatic and metapragmatic awareness. This is shown as much by the results showing increased competence as by the delayed results showing no further increase in competence.

Pragmatic development happens not only over time but more crucially through time and through prolonged immersion and repeated exposure to language and opportunities to having one's interpretations and expectations challenged (Padilla Cruz, 2013a). Therefore, studies testing pragmatic competence in L2 hearers need to allow for sufficient time and exposure for competence to be nurtured and consolidated. This ultimately means that without ongoing exposure to the target language and opportunities to have his interpretations challenged, the L2 hearer's ostensive-inferential competence is unlikely to further grow. It follows from this that learning to listen will result in the L2 hearer listening to learn only if he seeks and receives sufficient input and engage in output, thereby allowing for the adjustment of his

epistemic vigilance. This may partially explain the delayed post-test results as discussed in section 7.6, concerned with the delayed results and limitations of the present study.

Equally importantly, the study has shed light on the relationship between the adjustment of L2 hearers' epistemic vigilance and interlanguage development. Increased attention to paralinguistic cues not only allows L2 learners to evaluate and fine-tune their interpretive abilities but it also, at the same time, is a fundamental condition for their interlanguage development. The questionnaire results demonstrated more accurate stress placement and pragmatic justification in the post-test questionnaires. The qualitative results highlighted more accurate interpretation of Speaker B's intentions in the second input-and-recall session (i.e. stage 2 of the intervention). This shows that alertness to paralinguistic cues to ostension and adjustment of epistemic vigilance to these cues result in increased accuracy in L2 hearers' use of language in inferential comprehension. Improved accuracy and fine-tuning of interpretive abilities are believed to contribute to interlanguage development, thereby preventing L2 fossilisation (Nizegorodcew, 2007; Romero-Trillo, 2002). Interlanguage development is further demonstrated in section 7.4 below.

The results show that relevance theory can be used to inform instruction that aims to enhance L2 hearers' pragmatic competence through increased attention to one type of paralinguistic behaviour – prosodic pointing. Ifantidou's adapted framework can be used as a method to foster metapragmatic awareness, pragmatic awareness, and thereby enhance pragmatic competence in L2 hearers. The participants' increased access and use of paralinguistic cues focus their attention on the speaker's intentions, thereby making them more inclined to read their interlocutor's mind. Section 7.3 will demonstrate further evidence of this as well as of the central role that exposure to prosodic pointing played in association with the relevance-theoretic framework of the intervention.

7.3 Prosodic pointing is special: the multimodal argument

The biological argument for exploiting prosodic pointing as a pedagogical tool forms the basis for the multimodal argument: since we produce and process all linguistic and paralinguistic modalities immediately without compartmentalising them, all modalities should be made similarly accessible to L2 learners. What we know about the nature of communication and language processing should translate into how it can best be taught (Ortega, 2005; King and Mackey, 2016). According to Loevenbruck, Dohen, and Vilain (2009), pointing is a ‘special’ phenomenon in that the prosodic and gestural pointing modalities that it involves recruit the same cerebral domain. It is suggested that ‘integrated multisensory representations’ may be needed in order to produce and perceive prosodic pointing (Loevenbruck, Dohen, and Vilain, 2009, p. 211). It is important to note again that in Loevenbruck, Dohen, and Vilain (2009), the term ‘prosodic pointing’ refers to prosodically-cued pointing only or what I call contrastive stress. Loevenbruck, Dohen, and Vilain (2009) therefore suggest that contrastive stress is accessible to the hearer by virtue of co-occurring with other modalities. In the present work, prosodic pointing is defined as involving prosodically-cued and gestural pointing, together with the accompanying head movement and facial expression. The reason for adopting this variant lies in the idea that prosody functions as gesture and that this is where its pragmatic force lies. To understand the pragmatic role of intonation, and especially that of contrastive stress, is to understand its gestural dimension. Therefore, one of the arguments put forward in this thesis is that teaching the pragmatics of prosody (Romero-Trillo, 2012, 2016, 2019) is best addressed by looking at prosody in its gestural context, which the term prosodic pointing reflects (Madella and Romero-Trillo, 2019).

The comprehension test results obtained at stage 2 of the intervention when the participants were exposed to prosodic pointing as opposed to contrastive stress alone support this argument and, at the same time, Loevenbruck, Dohen, and Vilain’s argument. They show (1) the clear benefits of having access to multimodal input when interpreting speaker meaning, and (2) the role of multisensory integration in facilitating perception of prosodically-cued pointing and understanding of its pragmatic function. (2) is illustrated in the example responses below. Although

contrastive stress is available at stage 1, it is not attended to or at least not recalled as much as at stage 2. At stage 2 however, when participants have access to multimodal input, they attend to prosodically-cued pointing and use it to infer Speaker B's intentions:

Yuyue: Wasn't (stage 1) → He \ was = meaning 'no'. (stage 2)
Bryan: Probably still, not sure (stage 1) → She \ was. No. (stage 2)
Mengran: Yes (stage 1) → She \ was. Before, not now. (stage 2)
Cicy: She was (stage 1) → She \ was. His face shows she didn't succeed. (stage 2)

Comparing the participants' performance at stages 1 and 2, has shown the advantage that access to all modalities give to the L2 hearer when interpreting Speaker B's intentions. It showed that access to prosody alone does not generate intention-oriented interpretations from the respondents. It also clearly showed that while access to prosody alone does not generate pragmatic interpretation, access to prosodic pointing does. At stage 2, participants use descriptions such as '(he) agrees' (Yuyue, Ruiping), 'he agrees with her' (Danica), 'he thinks she's right' (Zendric), 'he wants to emphasise his questioning' (Skylar), which show they attributed intentions to the speakers. Access to prosodic and visual cues generated more of an interpretation from the respondents, as those answers illustrate: 'she wanted to but gave up' (Shirley), 'it's a secret' (Bill), 'he's surprised because she thought he wasn't' (Johnny), 'Looks surprised because she did not see him' (Mengran) (for full details of the responses, refer to Appendix Six). Although this does not apply to all participants at stage 2, these intention-oriented interpretations are not at all visible at stage 1. Thus, the qualitative results seem to indicate that exposure to prosodic pointing, at stage 2, was effective in focusing the respondents' attention on the speakers' intentions in comparison with exposure to contrastive stress alone 1. The implication of this is that access to multimodal cues, seems to facilitate and engage L2 hearers in pragmatic interpretation of speakers' intentions. A closer look at the results have also shed light on two forms of interaction between prosodic and gestural modalities which show to have helped in developing L2 hearers' ostensive-inferential competence, in two different but equally significant ways.

According to the first way, exposure to prosodic pointing has helped in adjusting Chinese hearers' epistemic vigilance to the peculiarities of L2 communication. Exposure to prosodic pointing has helped Chinese hearers to develop more sophisticated, top-down interpretive strategies, whereby they have used and integrated the speakers' paralinguistic cues in their interpretations, to make full sense of the linguistic input. This is how they reached Speaker B's intended interpretations. More specifically, exposure to prosodic pointing has helped Chinese hearers to discriminate a 'yes' that shows agreement from a 'yes' that shows disagreement (He \ was), one that shows that there is more to be inferred (She √ was) and a 'no' that shows disagreement from a 'no' that shows agreement (\ He wasn't | \ No). In the examples below, the participants have gone from formulating a wrong or relevant enough interpretation, at stage 1, to reaching an optimally or close to optimally relevant interpretation at stage 2:

Bryan: No = he wasn't. → No, he wasn't = 'yes' to her question. Ruiping: No, meaning 'yes he was there'. → No, he wasn't no means 'yes', he agrees. Shirley: Yes. → No – face = she wanted to but gave up. Yuyue: Wasn't. → He \ was = meaning 'no'. Zendric: Yes, he wasn't'. → Yes = he thinks she's right – agrees with her.

Although these examples have already been provided to demonstrate evidence of epistemic vigilance, they are used in this section to show evidence of the effect of exposure to prosodic pointing on Chinese hearers' pragmatic awareness, growing from stage 1 to stage 2. Exposure to prosodic pointing has allowed the respondents to develop their alertness to ostensive paralinguistic cues and their ability to evaluate their own comprehension based on the attended cues so as to make informed decisions. In other words, exposure to prosodic pointing has enabled them to develop cautious optimism (Padilla Cruz, 2012, 2013a; Sperber 1994). This is all the more obvious when looking at how the participants have gone from misunderstanding Speaker B's intentions, at stage 1, to modifying their answer when exposed to prosodic pointing at stage 2, thereby accepting an alternative interpretation and discarding the one initially reached. Exposure to prosodic pointing has therefore enabled certain participants to challenge their first interpretation and reach the intended interpretation on the basis of

the cues they attended to. In further examples below, the participants made their use of paralinguistic cues explicit, thereby showing that access to prosodic pointing has facilitated their interpreting Speaker B's intended meaning:

Cicy: She \ was. His face shows she did not succeed.

Shirley: No – face = she wanted to but gave up.

Mengran: He \ was. Looks surprised because she did not see him.

Bryan: She \ was. No.

Skylar: Face – not now, before.

In the above examples, the use of paralinguistic cues has helped the participants in generating the right interpretation. Therefore, as well as showing evidence of metapragmatic awareness, i.e. the participants explicating the link between the cue and the intended meaning, these show their developing ostensive-inferential competence as the hearer's attention to the speaker's ostensive cues takes them to infer the speaker's intended meaning. Section 7.4 will show that while the ostensive cues helped some of the respondents to reach the full intended interpretation, attention to those cues does not always result in the participants using the cues effectively in interpreting the speaker's meaning. That is due to the nature of the interaction between the cues and the linguistic input. Thus, exposure to prosodic pointing has been effective in that it has given the participants opportunities to use the available input (prosodically-cued pointing, facial expression), to challenge their first 'naïve' interpretation in working their way towards the speaker's intended one. As section 7.2 has emphasised, evidence of metapragmatic awareness and pragmatic awareness in stage 2 input-and-recall sessions shows Chinese L2 hearers adjusting their L2 epistemic vigilance and therefore evidence of developing pragmatic competence.

According to the second way, access to prosodic pointing has helped in understanding the pragmatic role of prosody. Exposure to prosodic pointing has been effective in facilitating Chinese L2 hearers' perception of prosodically-cued pointing as well as their understanding of the pragmatic function of prosody. At stage 1, only one participant reported to have noticed the personal pronoun 'you' as being stressed. In contrast, at stage 2, not only 11 participants reported having noticed the accentuation

of ‘you’, but they also noticed it as opposed to ‘I’ and commented on the pragmatic function realised through its accentuation, namely to return a question. These results are in line with Loevenbruck, Dohen, and Vilain’s argument (2009) that perception of prosodically-cued pointing is induced by its integration into multimodal manifestations. These two different ways of helping L2 hearers’ pragmatic competence development are based on two different forms of interaction between the modalities involved in prosodic pointing. The participants shown to have benefited from exposure to two forms of interaction.

The first form of interaction is described as integrative, in that each modality is interpreted by virtue of its interaction with other modalities. Speaker B’s answers in all three samples of the dialogue present apparent contradiction between the linguistic form (indicating affirmation or negation) and the visual cues available at stage 2. They also all involve prosodic emphasis on an auxiliary verb form (i.e. be), which, as I have suggested, can help participants to work out how the visual input is to be interpreted. In all three samples, there is more to the speaker’s meaning than what the linguistic input alone suggests, and access to all paralinguistic cues (e.g. prosodic information, frown, (dis)agreeing face, maintained eye contact, head shake) can help fill this gap between linguistic input and speaker meaning. Paralinguistic cues can help them figure out how the linguistic input is to be interpreted. For example, in sample (3)-(4), the past tense in ‘She √ was’ may be initially seen as sufficient information to infer that ‘she’ is no longer trying to lose weight:

Speaker A: Is she trying to lose weight?

Speaker B: She √ was. (marked eye contact, forward head movement, frown and grimace)

This, however, is not the optimally relevant interpretation; it is a relevant enough interpretation. The hearer will have to attend to all paralinguistic and linguistic input (i.e. prosodic information, frown, grimace, maintained eye contact) to reach the optimal interpretation. The use of a fall-rise (‘She √ was’) indicates that Speaker B’s answer means more than ‘she is no longer trying’ and, as his face suggests, that this is not the whole story. Speaker B’s prosodic and visual cues show that what Speaker B

intends to communicate is that 'she' gave up, that there have been complications or that he is not supposed to tell. The cues are to be interpreted by virtue of their interaction with one another. In that sense, the interaction is said to be integrative or based on the integration of the different parts of the message. Stressing 'was' in 'She √ was' can only be interpreted as a negative answer if one understands the past tense being used in opposition to the present tense being used in the question. Even then, the stressing of 'was' cannot be fully interpreted. It is the facial expression or grimace that points towards the conclusion that there is more to the story. It leaves space for an interpretation going beyond Speaker B's meaning, as the participants have suggested: 'she wanted to but gave up', 'she tried but did not succeed', 'it's a secret'.

Sample (3)-(4) was shown to be one particularly relevant example for Chinese L2 hearers. In Chinese, tense is not indicated by verb forms but – instead – by adverbs, e.g. 'tomorrow', 'yesterday'. Also, as it has been previously pointed out, a positive verb form always means 'yes' or agreement in Chinese. Therefore, it cannot be assumed that Chinese L2 hearers will understand 'she was' as a negative answer. The data obtained in the input-and-recall sessions shows that although the past tense is used by some of the participants to understand that she is no longer trying: 'No', 'before, not now', 'she was, not now', it is not sufficient for the hearer to retrieve the optimal interpretation. It is Speaker B's face and the fall-rise intonation on 'was' that facilitate the hearers' retrieval of extra effects and lead them to the optimally relevant interpretation of 'She √ was'.

The second form of interaction can be described as paralleled. In this form of interaction, some modalities (e.g. gestural) can affect the availability of others (e.g. prosodic). Their interaction is described as paralleled in that they point in the same direction and there is less chance of L2 hearers seeing the cues to ostension as contradictory. Interaction (2) uses contrastive stress and co-pointing gesture on a personal pronoun as opposed to an auxiliary verb, which is in itself more subject to misinterpretation due to its polarity function (i.e. affirmation or negation). A personal pronoun already and naturally focuses on an identified person: 'you'. Stressing the personal pronoun 'you', by use of prosodically-cued pointing and co-pointing chin and hand only reinforces its effects by means of adding more cues to ostension, all

pointing in the same direction. It does not give the L2 hearer more competing signals to work out by virtue of their interaction. Instead, it helps the hearer focus on a single direction.

Although the integrative form of interaction was shown to be more challenging than the paralleled interaction, in that the cues can be regarded as contradictory and as not pointing towards the same interpretation, exposure to this type of interaction is expected to be more rewarding for L2 hearers and Chinese L2 hearers particularly. Exposure to the integrative form of interaction can fine-tune L2 hearers' epistemic vigilance to English-specific cues to ostension, develop their interlanguage and enhance their pragmatic competence. Also, crucially, vis-a-vis the pragmatic problems identified by Padilla Cruz (2013a), exposure to the integrative form of interaction bears more implications. It can help L2 hearers become aware of how misleading linguistic input can be and the importance of using paralinguistic input to know how to read linguistic input and the speaker's mind. In the paralleled interaction, the linguistic and paralinguistic input coincide. Therefore, exposure to this form of interaction would not dissuade L2 hearers from over-relying on linguistic input in the same way as the integrative one can. The paralleled interaction, however, was effective in that it facilitated Chinese L2 hearers' access to prosody and to its pragmatic force. Exposure to these two forms of interaction are seen as complementary. Understanding the pointing function and pragmatic role of prosody through exposure to interaction (2) is expected to help them attend to prosodically-cued pointing when exposed to interaction (1).

The integrative form of interaction allows me to further argue that contrastive stress does not encode anything. It is used purely inferentially. Scott (forthcoming) argues that all contrastive stress does is trigger the hearer's search for extra effects for putting the hearer to more effort due to its unexpected pattern. I suggest that the co-occurring modalities, reinforce the presumption of extra effects, which can be retrieved by attending to contrastive stress and its co-occurring counterparts. It is precisely because it is never interpreted in isolation but on the basis of its co-occurrence with other modalities, that contrastive stress can be said to be a non-encoded phenomenon. It is also where its relevance to L2 hearers lies. Exposure to the integrative form of

interaction can be seen as having more crucial implications for L2 hearers' development of ostensive-inferential competence, and, as section 7.4 will further show, it is all the more relevant to Chinese L2 hearers.

On the basis of the qualitative results and the participants' descriptions of one role of intonation, it is clear that the intervention has allowed the main participants to gain a better understanding of the pointing/pragmatic function of prosody. A qualitative comparison of the main participants' pre-and post-test responses strongly suggests that the intervention has had an effect on the participants' post-test answers. From their post-test responses, it is clear that all participants understood the question in relation to the intervention. They all reported on the same role of intonation: intonation used to highlight information, correct answers and understand others' intentions/communicate one's intended meaning. They describe intonation as that involved in prosodic pointing as a means of focusing their interlocutor's attention on 'what they want to say'. These results are further demonstrated by a qualitative comparison of the control group's pre- and post-test answers, in that the post-test responses offered by the control group are more heterogeneous. The main participants' pre- and post-test scores are shown to be significantly different while the control participants' are not. Beyond quantitative confirmation of the intervention having had an impact on the main participants' understanding of the role of intonation, their qualitative descriptions allow me to draw even stronger and clearer conclusions as to the effect of the intervention on the main participants' understanding of intonation. Exposure to prosodic pointing has allowed the participants to gain a better understanding of how intonation for meaning, and contrastive stress particularly, works.

Crucially, the main participants' descriptions of one role of intonation suggest that they see intonation as functioning as gesture. They did not explicitly write that intonation was functioning as gesture – only one participant wrote that intonation was 'used with gesture' – however, their descriptions of the role of intonation converge with their descriptions of change in listening and speaking strategies. One main difference is seen between the two sets of responses, and this is their reference to 'body-language' and 'facial changes' in their descriptions of strategies as reported in

the post-test questionnaire. Finally, another convergence, between these two descriptions and the participants' report on stage 2 provides further evidence of there being a link between stage 2, the participants' understanding of the pragmatic role of prosody and the reported changes in their strategies. From the participants' descriptions of what stage 2 was about and what they learned, descriptions of what prosodic pointing involves and what its function is emerged. Interestingly, the descriptions are very close to the description of the role of intonation alone and the change in strategies observed by the participants. It strongly suggests that the participants have understood that intonation and gesture work in the same way. Their answers suggest that they understand the strong gestural dimension of intonation. These findings bear important implications. Exposure to prosodic pointing seems to be effective in raising L2 hearers' awareness of the pragmatic role of prosody and of its relevance to them as hearers and as speakers. L2 hearers understand that intonation is used to:

'attract listener attention, 'let people who are listening know meaning of words', 'help us identify important words', 'let other know where she/he should pay attention to', 'together with b-1 explain the main idea', 'emphasise important information and express your meaning', 'make meaning clear', 'highlight and catch key information', 'focus on key words', 'correct answers.'

It was hypothesised that focusing the participants on the pointing function of prosody – at stage 2 of the intervention – could help them understand the pragmatic force of prosody. The results indicate that not only prosody is more easily perceived when coupled with co-pointing gestures, but it also is understood in its multimodal context as functioning not only with but more crucially *as* gesture. These results support the view that acoustic and visual cues to ostension are produced and processed together and, as such, are to be learned and taught together. Especially if the goal of L2 instructors is to enhance L2 hearers' pragmatic competence, and teach the pragmatic role of prosody, adopting a multimodal approach to language learning is essential. These results are in line with the assumption presented in Chapter One that the pragmatic force of prosody comes out of its strong gestural dimension. It justifies that we, L2 research practitioners, embrace multimodality.

In this thesis, I hypothesised that adopting ostensive-inferential communication to inform my model of instruction would allow me to test pointing as a ‘special’ pedagogical tool for enhancing pragmatic competence. At the same time, I hypothesised that prosodic pointing would trigger the mechanisms at the core of the relevance-theoretic comprehension heuristic. On the basis of the results gathered in sections 7.2 and 7.3, namely the effectiveness of a relevance-based intervention and the effectiveness of prosodic pointing in enhancing Chinese hearers’ pragmatic competence, I suggest that their effectiveness comes from their collaboration. Prosodic pointing and ostensive-inferential competence work together in a complementary relationship. Prosodic pointing has allowed me to test the Noticing-as-Ostensive (NaO) model. As the above discussion testifies, prosodic pointing has shown to have great potential for engaging L2 learners in intention-based communication and to encourage them to understand meaning in terms of their interlocutor’s intentions. In that sense, the study’s outcomes support the pedagogy that the study tested and prosodic pointing as a paralinguistic behaviour central to this pedagogy. The outcomes largely support the NaO model of instruction in association with prosodic pointing. However, as section 7.4 will discuss, an exploration of the developmental processes at stage 2 of the intervention also shows that awareness of the speaker’s ostensive behaviour is not always a sufficient condition for retrieving the intended interpretive effects.

7.4 The implications of exposure to prosodic pointing for Chinese L2 hearers: noticing and noticing the gaps

The qualitative data collected at stage 2 of the intervention, when the participants were exposed to the post-recall tasks, sheds further light on the important role of prosodic pointing in setting the stage for new attentional biases in the L2. On the basis of the respondents’ report of what stage 2 was about and what they had learned by the end of stage 2, it is clear that access to prosodic pointing has done more than facilitate their noticing of pointing cues. During the post-recall tasks at stage 2 of the intervention, the participants noticed a gap between their use of a linguistic description to identify a Guess Who character who, for example, wears glasses: ‘The girl with yellow hair’,

and me stressing a personal pronoun and pointing to a character simultaneously: ‘\ She does’. Thus, the respondents noticed a gap between the output they generated and the input I generated. Noticing the gap (Schmidt, 1990) or difference between output and input certainly contributes to learners noticing the form they were not capable of producing and the gap in their knowledge at the time of the task. For some participants, it was not a matter of being capable of using the form, but one of being allowed to use non-verbal communication (i.e. a pointing gesture) to answer the task. They naturally relied on a word-based description as the only possible alternative. The post-recall tasks generated an element of surprise and an opportunity for respondents to notice more than one gap, as their reports on stage 2 show. The respondents reported having noticed:

A gap between the modes of communication identified in the input and those that they would otherwise rely on. This contributed to them paying attention to those non-verbal modes of communication, such as a head movement, a pointing gesture, contrastive stress. This corresponds to noticing the gap between output and input.

A gap between how Chinese works and how English works. They explained that in Chinese, if a speaker wants to disagree with a negative statement, he or she would have to say ‘No, he has’. Similarly, if they want to agree, they would have to say ‘Yes, he hasn’t’.

A gap between the type of instruction and forms of communication that they are generally exposed to, in China, and the instruction that they are receiving as part of the study. Using bodily actions as a hearer and a speaker was found to be unnatural, and one participant explained that he was not prepared to use his face.

Finally, some of the participants reported on the implications of having noticed those gaps for their learning: ‘If I know that, I can learn easier’. This suggests that noticing those gaps may have generated new metacognitive strategies among the participants.

It is important to note that not all participants noticed all gaps. The gaps described were noticed and reported by different participants. As speculated and discussed in Chapter Four, because of how prosodic pointing interacts with L2 learners’ expectations, it was noticeable *because* it was unexpected. In that sense, the participants’ qualitative answers were found to be in line with the idea that something

that is ‘unusual because of its infrequency may stand out for a learner.’ (Gass, 1988, p. 202; Gass, Spinner, and Behney, 2018). Based on the respondents’ answers however, it cannot be said that the respondents noticed paralinguistic features (i.e. head movement, contrastive stress) by virtue of not having those features in their L1 (Gass, Spinner, and Behney, 2018). It seems that the unexpectedness of the input came as a result of not having been exposed to it in the English classroom in China: ‘This is not how we learn English in China.’ (Li), ‘Back home we only focus on words.’ (Kevin). Therefore, prosodic pointing can be exploited in L2 instruction as a platform for salience: L2 learners may be more sensitive to features that they are not usually exposed to. The newness of instruction can affect the way L2 learners respond to it.

Exposure to prosodic pointing (stage 2 of the intervention) shows to be critical, as the noticing that it generates participates in setting the stage for new attentional biases and, at the same time, prevents interlanguage fossilisation (Romero-Trillo, 2002). The implications of these findings are twofold. Exposure to prosodic pointing not only seems to play an active part in focusing L2 hearers’ attention to speaker ostensive paralinguistic behaviour, but it seems to be particularly relevant to Chinese L2 hearers, based on (1) the input they are generally exposed to in instructional contexts back home, (2) the modes of communication they are more likely to rely on and pay attention to, as a result of (1), and (3) the weight of linguistic input over paralinguistic input: ‘if I say ‘yes’, I agree’, as a result of (1) and (2). Exposure to prosodic pointing seems to have played an active part in refocusing Chinese L2 learners’ attention. Those new attentional biases believed to have been established at stage 2 of the intervention were visible in the post-test questionnaire in the form of changed strategies: ‘I pay more attention’, ‘I pay attention now compared to before I paid none’, ‘I focus more on’, ‘I start to use’, ‘from attention to words and sentence meaning to attention to facial changes and gesture’. The change in strategies described by the participants in the post-test questionnaires is clearly to do with their newly established attentional biases. More evidence suggests that this shift in their attentional focus was a result of having been exposed to prosodic pointing at stage 2 of the intervention and that stage 2 was as a result crucial in (re-)focusing their attention to the peculiarities of communication in L2. In their descriptions of what stage 2 was about and what they had learned by the end of stage 2, the participants highlighted the importance of both visual and

acoustic cues and their implications for understanding their interlocutor's meaning and their relation to newly developed metacognitive strategies.

A further element allows me to draw a clear connection between stage 2 and the participants' performance in the post-test questionnaires. Very close descriptions of, firstly, what stage 2 involved and their understanding of the role of prosodic pointing, secondly, one role of intonation and thirdly, change in their strategies as hearers and speakers. The results show clear overlaps and parallels in the respondents' answers to the three items. This, crucially, as well as showing the effect of the intervention, shows the major role played by exposure to prosodic pointing at stage 2 in impacting the respondents' strategies and overall performance in the post-test questionnaire.

The qualitative data collected through introspective investigation has shown that the study is particularly relevant for Chinese L2 hearers. Not only has it demonstrated the contributing role of exposure to prosodic pointing in establishing new attentional biases and preventing interlanguage fossilisation, but it has also and importantly shed further light on the factors preventing Chinese L2 hearers from reaching their interlocutor's intended interpretation and adjusting their L2 epistemic vigilance. As well as showing clear evidence of developing epistemic vigilance and pragmatic awareness, as 7.2 discussed, the qualitative data obtained in the input-and-recall sessions has also shed light on Chinese L2 hearers' ineffective use of prosodic pointing and resulting misinterpretation. The data further reflected the pragmatic problems characteristic of L2 learners, e.g. overreliance on linguistic input. Evidence of naïve optimism was also found; in other words, evidence of the participants believing one interpretation that yields some cognitive reward at a low cost (Sperber, 1994; Padilla Cruz, 2012). For example:

Johnny: No – if I agree I should say yes (stage 2)

Zendric: No – man shakes head (stage 2)

Attending to extra contextual inputs but not going as far as searching for the extra or different pragmatic effects that they presume and challenging their initial, 'default' strategy may be a sign of them relying on the linguistic base of the input as central and

primary meaning, or a sign of them following naïve optimism by default. It shows that juggling with more ostensive cues does not necessarily lead to an easier route to the optimally relevant interpretation, especially if those cues seem to be contradictory. In the introspection-based data, the qualitative component provides more than evidence of participants not pursuing noticed cues; it provides clues as to their strategies and why they did not. It shows, for instance, the participants' reluctance to move away from L1-established rules (i.e. 'was' means 'yes'), which prevent them from challenging their initial interpretation even after noticing the cue that presumes of extra pragmatic effects, as the below example responses illustrate:

Joyce: She was, yes – face expresses no (stage 2)

Ruiping: Was means yes – face did not agree (stage 2)

Access to the participants' thought processes has helped confirm the problematic, at different levels. Firstly, it has allowed me to find further evidence of the pragmatic problems previously identified by Padilla Cruz (2013a). Even though the participants paid attention to contradicting cues, they chose to overlook them or failed to integrate them into their final interpretation, which, as a result, was either not optimally relevant or the wrong interpretation. Consequently, they also failed to read their interlocutor's mind appropriately. Secondly, the introspective data from the participants' self-reported thought processes, has, as mentioned above, helped me further understand the mechanisms they used and the reasons for not challenging their default interpretation. I found, as main reasons, the role played by their L1 in guiding those interpretive paths and their reliance on what they are usually taught to listen for: words. Those participants demonstrating overreliance on linguistic input and pre-established concepts (e.g. 'was' must mean 'yes') have been misguided and were made to believe that the linguistic input relates to the central, primary or real meaning of the message, while the paralinguistic inputs, if mentioned at all, are simple modifiers (Crystal, 1975). What this means is that, as well as shedding light on the role of prosodic pointing in adjusting L2 learners' epistemic vigilance and thereby enhancing pragmatic competence, the qualitative part of the results have further pointed out some of the main problematics that Chinese L2 hearers in particular are likely to face when exposed to prosodic pointing in situations of agreement or disagreement.

Although cues to ostension were noticed, since they triggered the hearers' search for relevant effects (e.g. 'he says he was, but his face shows no'), the search was at times abandoned, and the noticed cues were not always integrated into the interpretation. As illustrated below in the Noticing-as-Ostensive (NaO) framework, the cues were not always used as input to further inferential processing or, if they were, they were not used to retrieve the relevant pragmatic effects. Noticing ostensive stimuli therefore does not guarantee their integration or appropriate use into the generated interpretation. These observations have allowed me to go back to the NaO model and mark where difficulty may potentially be faced by Chinese L2 hearers based on the present findings, as illustrated below:

- (a) Notice as ostensive – identify relevant paralinguistic indexes as evidence of an intention (Pragmatic Awareness – Attentional Abilities). This involves attending to ostensive paralinguistic stimuli and recognising the stimuli as evidence of the speaker's intentions *and as inputs to further inferential processing*. The stimuli, as I propose, is prosodic pointing.
- (b) *Retrieve relevant pragmatic effects* – understand intentions in relation to the evidence (Pragmatic Awareness – Inferential Abilities).
- (c) Explicate the link between paralinguistic indexes and pragmatic effects – between evidence and intentions (Metapragmatic Awareness).

This version of the NaO model is thought out to help further investigation identify where in the framework the difficulties potentially lie based on the present findings. As pointed out in section 7.6, presenting suggestions for future directions, the nature of instruction may impact the L2 hearers' use and trust in the paralinguistic input in such a way as to encourage L2 learners to systematically exploit paralinguistic cues and challenge their default or initial interpretation. Also discussed in section 7.6, the lack of opportunities for negative feedback and negative evidence in the input-and-recall sessions means that the L2 learner did not have reasons to challenge their interpretations. As suggested in section 7.6, more input-and-interaction sessions, with opportunities for the participant to negotiate meaning, is believed to trigger his evaluation of his own comprehension and his search for optimal relevance.

These results are crucial in providing further rationale for the study. The study has focused on enhancing Chinese L2 hearers' pragmatic competence through exposure to prosodic pointing, and the results further justify the need for such a focus. The qualitative results indicate that the factors contributing to the participants' ineffective use of prosodic pointing in inferential comprehension are the very factors that justify the need for instruction that exposes them to it. In other words, reasons for Chinese L2 learners acknowledging but not fully exploiting a paralinguistic cue (i.e. a frown) and abandoning their search for relevance (i.e. why the frown?) were found in their primary focus on (and trust in) linguistic input over paralinguistic input, their trust in pre-established L1-based rules according to which a 'yes' answer must mean agreement, and resulting failure in reading their interlocutor's intended interpretation. These all closely correspond to the pragmatic problems identified by Padilla Cruz (2013a). The way that those problems interact also further demonstrates that in order to address them, those need to be addressed together. This is particularly crucial when it comes to helping Chinese L2 hearers overcome pragmatic failure, as there is clear evidence from this study that those problematics can stand in the way of their pragmatic competence development.

These results show the need for more instructional pragmatics studies focused on L2 learners' accessibility to and use of multimodal contextual cues to speaker's intentions, as it shows that linguistic input still prevails in the conclusions drawn by participants over paralinguistic input. In that sense, these findings are in line with what Littlewood (2014, p. 249) describes about education in China: 'Education is conceived more as a process of knowledge accumulation than as a process of using knowledge for immediate purposes.' To which Ellis (2016, p. 423) adds that a communicative or task-based approach may be seen as 'culturally inappropriate'. This, I suggest, further justifies the need for and relevance of focusing Chinese L2 learners on mental activities, involving the use of input for further cognitive processing. At the same time, it may provide explanation as to the limitations of the present study and the challenges that future instructed L2 pragmatics acquisition studies focusing on the same population may face.

7.5 Learning to trust paralinguistic input

Cases of weak communication and interpretations that may go beyond the speaker's meaning (Sperber and Wilson, 2015; Carston and Wilson, 2019) need integrating into pragmatic development studies. For example, in 'She √ was' indicating that she had failed in her attempt to lose weight, the face may be interpreted as 'she found it difficult and gave up', 'she was but something unexpected happened', and 'she was and her giving up may have consequences on her health'. Is the speaker judging her, hence the face? Or does the face mean that this is a subject that should be avoided? Not knowing precisely and accepting uncertainty is also part of developing pragmatic competence. Developing acceptance that our interpretation may go beyond what the speaker had intended to communicate should also be acknowledged. I suspect that L2 teachers' reluctance to incorporate paralinguistic features into their English lessons may reflect more than just their lack of confidence. It may reflect their fear of communicating uncertainty. L2 learners often expect and ask for black or white answers. This may be partly due to their L1 relying less on pragmatic mechanisms and more on structural or linguistic constraints. In English, pragmatic mechanisms play a much more central role, as demonstrated particularly in Chapter Three. What this means is that it can therefore be expected that English be more subject to grey areas, to uncertainty, and that uncertainty is, as a result, part and parcel of learning English.

Also, reading the speaker's mind is also a matter of reading the speaker's choices as to how he has communicated that meaning. Paralinguistic cues are an important part of reading the speaker's choices. They are not there only to be seen, acknowledged, and then excluded from the interpretation. Rather they constrain how we interpret the words uttered. They may interact with the words in a way that not only add information but also complexify the interpretive process and lead to a somewhat 'nebulous' interpretation (Wharton, 2009, p. 146). As much as L2 instruction should focus the L2 hearer on interpreting the speaker's intended meaning, it should also emphasise and reflect, through a multimodal approach to language, that there is room for this uncertainty, and that there is not a direct route to L2 comprehension, but rather a bumpy road with opportunities to test interpretive hypotheses.

My main motivation behind the study was to test and refine the hypothesis that exposure to prosodic pointing is particularly relevant to Chinese L2 hearers. What the results seem to indicate is that factors such as tolerance of ambiguity (Ehrman, 1999) *can* inform a discussion of the results and an explanation of the observed reluctance to trusting paralinguistic input in Chinese L2 hearers. The relationship between the idea of avoiding or accepting uncertainty as observed and described above and the notion of tolerance of ambiguity, described by Padilla Cruz (2018, p. 158) as the ‘capacity to deal with unusual, and maybe contradictory, experiences, and to integrate them into one’s cognitive structures’, may be worth investigating further. Tolerance of ambiguity may be of particular relevance to studies focused on developing pragmatic competence in Chinese L2 hearers, as it links to the L1 linguistic constraints (L1-based concepts), mentioned in the present work, which may result in *confirmation bias*, the ‘tendency to tenaciously adhere to conclusions that seem sufficiently supported by available information’ (Padilla Cruz, 2018, p. 155), and to culturally embedded constraints, as observed in the previous section. I suggest that future investigations look further into these constraints from the perspective of tolerance of ambiguity since developing familiarity with these constraints means that L2 practitioners can refine existing instruction, tailor it to Chinese learners of L2 English and so minimise or avoid pragmatic development injustice (Padilla Cruz, 2018). While the present study hereby takes into account *collective* tolerance of ambiguity based on the participants’ L1-induced constraints, when determining the impact of the intervention and the participants’ pragmatic development, it does not look into factors related to individual differences and personality, such as motivation and ego boundaries (Hartmann, 1991). In future work, it would be interesting to explore these other factors.

‘Reliance’ can mean dependence on and/or trust in something or someone. While previous studies have shed light on L2 learners’ overreliance on linguistic input most probably in the sense of dependence, I strongly suggest that we strive to teach them to rely on paralinguistic input, in the sense of trusting its cognitive worth. Teaching to trust paralinguistic input would encourage L2 learners to challenge their initial default interpretation and to understand that it is ‘useful to consider how visual information

enhances linguistic input, or distorts it, or replaces it, and sometimes even contradicts it.’ (Rost, 2016, p. 42).

7.6 Limitations and suggestions for future directions

While evidence of the immediate effect of the treatment manifested itself in the enhancement of the participants’ pragmatic competence, it did not allow me to conclude that the effect of the intervention truly resulted in learning. L2 learning studies adopting a pre-test/post-test design increasingly use delayed post-tests to determine the longer-term effects of a pedagogical treatment (Mackey and Gass, 2016). The present study included a delayed post-test questionnaire, identical to the immediate post-test questionnaire, in June 2018, that is nine months after the end of the intervention. The delayed post-test questionnaire was designed to determine whether the participants had learned to listen, through the intervention, so that they would listen to develop their pragmatic competence further during their stay in the UK.

The difference between pre-test and delayed post-test scores was found to be significant, thereby suggesting lasting effects of the intervention. Lasting effects strongly indicate that the participants’ pragmatic competence as L2 hearers was enhanced through being exposed to the intervention. However, the difference between their pre-test and delayed post-test scores was not quite as significant as the difference between the pre-test and the immediate post-test ones. The qualitative data also reflected more disparities among participants in their exposure to the target language. As Mackey and Gass (2016, p. 202) note, one disadvantage of delayed post-tests is that the likelihood of ‘extra-experimental exposure’ is high, and the more delayed the post-test the higher the probability of individual factors having interfered with the long-term effectiveness of the intervention. To put it simply, there is a greater chance of individual variables having impacted the results in the delayed post-test questionnaire. At the time of the intervention, the participants were all exposed to the same English course and to the same intervention, and even though any pedagogical experiment is subject to individual variables, those could be minimised. It is important to note that, while the study has strived to rule out the possibility of external factors

influencing the participants' progress at the time of the intervention, it does not assume that no other possible factors may have contributed to the results. As in any study concerned with learning and individual learners, external factors may have influenced the results, in one direction or another.

Even if the delayed post-test had shown further improvement in scores, it would have been difficult to argue that this was a result of having been exposed to the intervention nine months earlier. Another aspect that could be seen as a limitation is that the delayed post-test was identical to the immediate post-test, for comparability purposes. Participants might have further improved, but if they had a top score in the immediate post-test assessment, they could not have a higher score in the delayed post-test one. Therefore, a further study may want to strive to design comparable yet different delayed post-tests which test whether the participants have further improved. Multiple delayed post-tests in the weeks and months following the intervention would also have provided the participants with opportunities to consolidate their newly developed competence. They could also help further determine whether the intervention resulted in learning (Mackey and Gass, 2016).

Further limitations can be seen in the type of instructions used in the input-and-recall sessions. When asking the participants to justify their answer to the comprehension question (i.e. How do you know?), in order to encourage them to explicitly link paralinguistic cues to intentions, I did not explicitly ask them about paralinguistic cues that may have guided their interpretation. I used implicit instruction. As a result, not all participants report the use of paralinguistic cues in interpreting Speaker B's meaning. It is worth asking whether instruction that explicitly requires L2 learners to pay attention to and report on paralinguistic cues may hold a better chance of raising their alertness to speaker's contextual cues and facilitating their reading of the speaker's intentions. Explicit instruction would potentially encourage L2 interpreters to systematically and fully exploit speaker's ostensive behaviours as guiding cues in the inferential path.

A third recall session could have enabled learners to consolidate mechanisms developed by the end of stage 2. Another aspect of the instruction which I see as

limited is the lack of opportunities for negative feedback, which the learners would have in real life communication. In the field of SLA, not only input, but also and more crucially, interaction has shown to be important in language development (Long, 1996; Gass, 1997; Mackey, 1999), for it provides the L2 learner with opportunities for negotiating meaning. The experiment could have included input-and-interaction sessions as well as input-and-recall sessions. While ostension can be understood from the point of view of an overhearer, direct interaction with the interlocutor may be more rewarding in the context of developing L2 mind-reading skills.

It is suggested that further applications of the study retain stage 1 as a prosody alone input-and-recall session. While stage 1 was originally thought of as a way of determining whether exposure to prosodic pointing would benefit the participants' retrieval of the speaker's ostensive behaviour and intentions, it developed into a stage which participated in making the participants aware of the importance of fully exploiting all paralinguistic cues that were available to them at stage 2, both as hearers and speakers. From experiencing both modes of exposure, they can appreciate the need to have access to those paralinguistic cues at stage 2, as the following quotes from participants illustrate:

'I remember more' (Shirley),
'It is clearly because of body-language' (Li),
'I remember more from visual information' (Bill),
'The body-language and face help me understand' (Kevin),
'I understand more clearly because I can see the body-language' (Danica),
'It's easier to remember because I can watch, see who speaks and their different faces' (Joyce).

Therefore, I suggest that stage 1 is used as an essential part of raising L2 learners' awareness of the central intention-cueing role of all paralinguistic behaviours in oral comprehension.

7.7 Chinese L2 hearers and beyond

It is important to note that, although part of the results can be seen as positive, in that it shows the impact of exposure to prosodic pointing on the Chinese L2 hearers' pragmatic competence development, the study yielded results which may be regarded as less positive but which are in fact all the more insightful. They show that my rationale for addressing Chinese L2 hearers' pragmatic competence in the first place is a valid one. I make a point of showing that positive results are not to be seen as better or as having more value than negative results, as negative results still tell us something and, in that sense, are just as worthwhile. Successful research is not always about getting a pedagogical treatment to work and obtaining the desired effect, but it is also about understanding why it has or has not worked in the intended way. This is all the more relevant to the present study, which was testing how one specific population would respond to the intervention and whether the intervention was well-targeted for the population. The study's outcomes support the pedagogy that the study tested and prosodic pointing as a paralinguistic behaviour central to this pedagogy. The relevance of the study to Chinese L2 hearers is shown both in the so-called positive results and in the less positive ones. The intervention impacted a majority of my participants' pragmatic competence, while it also further highlighted factors that could prevent Chinese L2 hearers from fine-tuning their epistemic vigilance and developing as pragmatically competent L2 hearers. The study thereby offers an important insight into what to expect from exposing Chinese L2 hearers to prosodic pointing in the context of developing their ostensive-inferential competence as L2 hearers, which will inform further research.

The experiment involved exposing Chinese L2 hearers to situations where misunderstanding arises. The findings further pointed out the factors that Chinese L2 hearers typically take into account or overlook when processing input, thereby enhancing my rationale for encouraging Chinese L2 hearers to rely on the speaker's paralinguistic behaviour. These findings are in line with Padilla Cruz's call for 'activities that point out where the misunderstanding lies, the factors that misguide learners to wrong interpretations or those they do not pay attention to.' (2013a, p. 130). The study thereby constitutes an important contribution to the field of instructional

pragmatics. It has shown that the pragmatic problems identified by Padilla Cruz (2013a), namely overreliance on linguistic input, lack of attention to paralinguistic cues, and difficulty to carry out top-down processing were particularly characteristic of Chinese L2 hearers and one main reason for them to be misguided and to fail to reach the interpretation intended by their interlocutor.

In English, paralinguistic cues play a central part in triggering pragmatic mechanisms and guiding the inferential processes involved in recovering optimally relevant interpretations. Attuning Chinese L2 hearer's epistemic vigilance to the speaker's paralinguistic behaviours has shown to help them overcome the above highlighted pragmatic problems. So, while the study reinforces the rationale for addressing Chinese L2 learners' pragmatic competence development, it also reveals hopeful results, which indicate that epistemic vigilance development addressing pragmatic problems is possible. The results point out to the many benefits of exposing them to prosodic pointing: it facilitates their development of pragmatic and metapragmatic awareness which comes with the development of more sophisticated interpretive abilities, and it contributes to the development of their interlanguage and metacognitive strategies.

These results indicate that there is ample room for further experimental investigation engaging with and addressing L2 pragmatic issues, and that there is every reason to believe that any L2 hearers would benefit from being exposed to prosodic pointing. The primary aim of the thesis was to demonstrate the need to reconcile L2 listening instruction and L2 pragmatics studies and reflect the central role of paralinguistic behaviours in pragmatic competence development. The theoretical foundations for the study show that, although I chose to focus on enhancing pragmatic competence in Chinese L2 hearers for reasons that I have clearly presented and which the study has further supported, the core and underlying assumptions in my thesis are meant to apply to all learners of L2 English. As we have seen, prosodic pointing may be more or less disruptive across L1s, and L1s may offer a platform for expectations and thereby salience. The model of instruction presented and tested in the study included instances of prosodic pointing which are expected to misguide Chinese L2 learners towards wrong interpretations. The dialogue, however, can apply to any L2 learners of English,

and, at the same time, it can be modified so as to include instances of prosodic pointing targeted for a particular audience.

7.8 Conclusions

This thesis has justified the need for a new way of addressing oral comprehension in L2 instruction. It has demonstrated how L2 listening and pragmatic development go hand in hand, and why redefining listening instruction must involve promoting attention to all communicative paralinguistic behaviours. Exposure and learned attention to the paralinguistic behaviours involved in prosodic pointing was shown to facilitate Chinese L2 hearers' access to and interpretation of the speaker's ostensive stimuli.

Prosodic pointing was first coined in Madella and Romero-Trillo (2019), a paper that argues for the importance of the present research for the development of work on the pragmatics-prosody interface and its implications for L2 teaching. The field of prosodic pragmatics is now expanding so as to reflect the central role of all communicative paralinguistic behaviours in achieving pragmatic effects and the subsequent implications for intercultural communication and L2 teaching. The present study shows that access and increased attention to not just prosody, but English-specific paralinguistic cues more generally, can prevent L2 pragmatic fossilisation and that development of epistemic vigilance in the target language can have a positive impact on interlanguage development. It also shows that access to multimodal input can facilitate access to prosody and thereby assist in raising awareness of the pragmatic force of prosody.

In largely supporting the pedagogy tested, the outcomes of the study also support the use of relevance theory as a reliable theoretical model of L2 instruction that aims at the enhancement of pragmatic competence in L2 hearers. This research also and importantly offers the first study to apply relevance theory to L2 pedagogy concerned with oral inferential comprehension and the use of prosodic pointing as one specific type of paralinguistic behaviour. It therefore contributes to the ongoing development of relevance theory as a theory of L2 instruction. This relevance-theoretic model of

instruction or Noticing-as-Ostensive Model (NaO) also sheds light on relevance theory as a potential candidate for a theory of input processing which can make Schmidt's Noticing Hypothesis (1990) more cognitively and psychologically sound. The NaO model thereby offers a possible route of investigation to address VanPatten's criticism (2017).

At the same time, the present research calls for more studies focusing on the hearer's behaviour and the role of exposure to paralinguistic phenomena in enhancing L2 hearers' pragmatic competence. It is in its association with prosodic pointing that the pedagogical potential of ostensive-inferential communication manifests itself. As we have seen, exposure to prosodic pointing does trigger the socio-cognitive mechanisms underlying intention-based communication. The present research has shed new light on the power of pointing not only as a highlighting device but also and more crucially as a connecting device, believed to reach all L2 learners. I hope that my focus on pointing, in its audible and visible form, has reflected my view of L2 learning and teaching as having its roots deeply anchored in communication, and, as such, the present work is an advocacy for L2 pedagogy that is reflective of communication essentially as a multimodal phenomenon.

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Appendices

Appendix One: Pre- and post-test questionnaires

Pre-test questionnaire

Remember, **THIS IS NOT A TEST**. This is for yourself not for anyone else, so answer as honestly as you can.

Provide personal answers.

When I listen to an English speaker, I listen for

When someone is speaking English, I pay attention to

One role of intonation in English is to

Again, this is not a test. Tells us what is true to you.

Answer 1-5 in front of each sentence.

1. Never or almost never true of me
2. Usually not true of me
3. Somewhat true of me
4. Usually true of me
5. Always or almost always true of me

- When I listen to an English speaker, I listen for words only.
- When I listen to an English speaker, I listen for words and sounds.
- When I listen to a speaker of English, I pay attention to non-verbal communication features (e.g. gestures, facial expressions: eye gaze, eyebrow movement).
- When I speak English, I use intonation to help me communicate my message.

If you answer 3-5, how? Provide an example.

Underline the word(s) that carry an accent in "My name is Bond. James Bond."
(Tench, 1996) *Explain why.*

Underline the word(s) or number(s) that carry an accent in

"Is the extension number 325?"

"No, it's 345."

Explain why.

Underline the word(s) that carry an accent in:

"You told me what Emilia wants, but what do you want?"

Explain why. (Wells, 2006)

Paul: "Jane is not at home."

Marc: "She is at home."

'Is' carries the accent. Explain why.

Which answer, A or B, could replace Marc's answer?

A. 'Yes, you're right.'

B. 'No, you're wrong.'

References:

Oxford, R. (1990) *Language Learning Strategies: What Every Teacher Should Know*.
NY: Newbury House Publisher.

Tench, P. (1996) *The intonation systems of English*. London: Cassell.

Wells, J.C. (2006) *English Intonation: An Introduction*. Cambridge: Cambridge
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Immediate post-test questionnaire

Remember, **THIS IS NOT A TEST**. This is for yourself not for anyone else, so answer as honestly as you can.

Provide personal answers:

When I listen to an English speaker, I listen for

When someone is speaking English, I pay attention to

One role of English intonation is to

Answer 1-5 in front of each sentence.

Again, this is not a test. Tells us what is true to you.

1. Never or almost never true of me
2. Usually not true of me
3. Somewhat true of me
4. Usually true of me
5. Always or almost always true of me

- When I listen to an English speaker, I listen for words and sounds.

- When I listen to a speaker of English, I pay attention to non-verbal communication features (e.g. gestures, facial expressions: eye gaze, eyebrow movement).
- When I speak English, I use intonation to help me communicate my message. If you answer 3-5, explain how.

Answer 1-3 in front of the sentence below. Tell us what is true to you.

1. Not true of me
2. Somewhat true of me
3. True of me

I have seen my language learner strategies change over the past months. If you answer 2-3, explain how: how have your listening and/or speaking strategies changed?

Rate your exposure to the target language in the past months. How often did you speak or listen to English outside the classroom?

1. Very frequently
2. Frequently
3. Occasionally
4. Rarely

Where and who did you speak English with?

Underline the word(s) that carry an accent in “*My name is Bond. James Bond.*” (Tench, 1996) Explain why.

Underline the word(s) or number(s) that carry an accent in

“*Is the extension number 325?*”

“*No, it’s 345.*”

Explain why.

She pointed her finger at me and screamed:

“She did it.” ← Where does the accent go? Underline the word that carries the accent. Why?

Paul: “*John wasn’t at the party*”.

Marc: “*He was at the party! Didn’t you see him?*”

“*Was*” carries the accent. Explain why.

Which answer, A or B, could replace Marc’s answer?

A. “*Yes, you’re right.*”

B. “*No, you’re wrong.*”

When are they coming?

They are coming on Monday. ← Where does the accent go? Underline the word that carries the accent. Explain why.

Are they coming on Friday?

(No,) they're coming on Monday. ← Where does the accent go? Underline the word that carries the accent. Explain why.

So, they're leaving on Monday?

(No,) they're coming on Monday. They're leaving on Friday. ← Where does the accent go? Underline the words that carry an accent. Explain why.

They aren't coming on Monday, are they?

They are coming on Monday! ← Where does the accent go? Underline the word that carries the accent. Explain why.

(Tench 1996)

References:

Oxford, R. (1990) *Language Learning Strategies: What Every Teacher Should Know*. NY: Newbury House Publisher.

Tench, P. (1996) *The intonation systems of English*. London: Cassell.

Wells, J.C. (2006) *English Intonation: An Introduction*. Cambridge: Cambridge University Press.

Delayed post-test questionnaire

Remember, **THIS IS NOT A TEST**. This is for yourself not for anyone else, so answer as honestly as you can.

Provide personal answers:

When I listen to an English speaker, I listen for

When someone is speaking English, I pay attention to

One role of English intonation is to

Answer 1-5 in front of each sentence.

Again, this is not a test. Tells us what is true to you.

1. Never or almost never true of me
2. Usually not true of me
3. Somewhat true of me
4. Usually true of me
5. Always or almost always true of me

- When I listen to an English speaker, I listen for words and sounds.

- When I listen to a speaker of English, I pay attention to non-verbal communication features (e.g. gestures, facial expressions: eye gaze, eyebrow movement).
- When I speak English, I use intonation to help me communicate my message. If you answer 3-5, explain how.

Answer 1-3 in front of the sentence below. Tell us what is true to you.

1. Not true of me
2. Somewhat true of me
3. True of me

I have seen my language learner strategies change over the past year. If you answer 2-3, explain how: how have your listening and/or speaking strategies changed?

Rate your exposure to the target language in the past year. How often did you speak or listen to English outside the classroom?

1. Very frequently
2. Frequently
3. Occasionally
4. Rarely

Where and who did you speak English with?

Do you remember that you participated in an experiment during PS12 last summer?
(Yes/No)

What was the experiment about? What was the purpose of the experiment?

What did you have to do?

Do you think that this experiment helped you in any way during your time in the UK? During the academic year? How?

Do you think that it has helped you improve your listening skills? If yes, how?

Your speaking skills?

Underline the word(s) that carry an accent in “*My name is Bond. James Bond.*”
(Tench, 1996) Explain why.

Underline the word(s) or number(s) that carry an accent in

“*Is the extension number 325?*”

“No, it’s 345.”

Explain why.

She pointed her finger at me and screamed:

“She did it.” ← Where does the accent go? Underline the word that carries the accent.

Why?

Paul: *“John wasn’t at the party.”*

Marc: *“He was at the party! Didn’t you see him?”*

‘*Was*’ carries the accent. Explain why.

Which answer, A or B, could replace Marc’s answer?

A. *“Yes, you’re right.”*

B. *“No, you’re wrong.”*

When are they coming?

They are coming on Monday. ← Where does the accent go? Underline the word that carries the accent. Explain why.

Are they coming on Friday?

(No.) they’re coming on Monday. ← Where does the accent go? Underline the word that carries the accent. Explain why.

So, they’re leaving on Monday?

(No,) *they're coming on Monday. They're leaving on Friday.* ← Where does the accent go? Underline the words that carry an accent. Explain why.

They aren't coming on Monday, are they?

They are coming on Monday! ← Where does the accent go? Underline the word that carries the accent. Explain why.

(Tench, 1996)

References:

Oxford, R. (1990) *Language Learning Strategies: What Every Teacher Should Know*. NY: Newbury House Publisher.

Tench, P. (1996) *Transcribing the Sound of English: a phonetics workbook for words and discourse*. London: Cassell.

Wells, J.C. (2006) *English Intonation: An Introduction*. Cambridge: Cambridge University Press.

Appendix Two: Participant information sheets and consent forms

Participation Information Sheet – main group



Study topic: *‘Researching the communicative role of intonation in English and how to teach it to Chinese learners’*

Institution(s): **University of Brighton
and University of Surrey**

Lead
investigator: **Ms Pauline Madella**

I would like to invite you to take part in my research study on the communicative role of intonation in English. Before you decide whether you would like to participate, I would like you to understand (a) why the research is being done and (b) what it will involve for you. I will go through the information sheet with you and answer any questions you have. This should take about forty minutes. Talk to others about the study if you wish, and please ask me if there is anything that is not clear. You will be given time to think about whether you wish to take part before making a decision and may take this sheet away with you. You do not have to decide today whether or not you will participate in this study, and whether or not you do is entirely your choice. If you do not want to take part, you do not have to give a reason. If you do want to take part now, but change your mind later, you can withdraw from the study at any time.

This Participant Information Sheet will help you decide if you would like to participate. It sets out why I am doing the study, what your participation would

involve, what the benefits and disadvantages to you might be, and what would happen after the study ends.

If you agree to take part, you will be asked to sign the Participant Consent Form on the last page of this document. You will be given a copy of both the Participant Information Sheet and the Participant Consent Form to keep.

What is the purpose of the study?

The intonation systems of Mandarin Chinese and English intonation are significantly different: Mandarin Chinese is known as a tone language while English is an intonation language. For that reason, Chinese learners of English cannot always perceive English intonation. However, intonation in English is highly communicative since it can tell us about the speaker's intentions, and therefore learning English must involve learning how to interpret intonation. The purpose of the study is therefore to enhance the participants' listening abilities and communication skills through enhancing their perception (and subsequent production) of English intonation. The outcome of the research will contribute to studies on the effectiveness of techniques for enhancing L2 learners' inferential abilities and interpretive strategies, and studies researching the communicative role of intonation in particular.

What will my participation in the study involve?

Why have I been invited to participate? You have been invited to participate in the study because you are a Mandarin Chinese speaking learner of L2 English, at Master's level and with no prior experience of studying in the UK.

What is expected from the participant? As a participant, you will first be asked to answer a questionnaire on the role of intonation in English. This will take thirty minutes. You will then be invited to attend one-hour-long individual sessions which will constitute the intervention period. Three individual sessions will be arranged over the course of ten weeks. At the end of the intervention period, you will be asked to answer another questionnaire. This will take another thirty minutes. One last thirty-minute questionnaire will be administered to you in June 2018. This means that 4 and a half hours of your time will be involved in participation between July 2017 and June 2018.

In the first two individual sessions, you will be asked to answer listening comprehension questions, then to report to the researcher what you will have noticed in terms of the language forms you will have come across. In session 3, you will be expected to use intonation for meaning and will be audio recorded using the speech analysis software Praat. You will be able to see visual acoustic descriptions of your own production of intonation.

The researcher would make herself as flexible and accommodating as possible to arrange the individual sessions at the participant's convenience. For example, you would be asked to make yourselves available for one hour on either Monday, Wednesday or Friday afternoon in weeks 3, 5, and 9. The day and time would be set in advance and can be rearranged as long as it is scheduled in the same week. For example, if Monday afternoon in week 3 is no longer convenient for you, you can

reschedule your session for either Wednesday or Friday in week 3 as long as you understand your responsibilities as a study participant and let the researcher know in advance (24-hour notice is preferable).

What are my rights?

What will happen if I don't want to carry on with the study? You can withdraw from the study at any time without giving any reason for doing so. This will not affect the care you receive as a student. You can ask for the data already provided to be deleted if you wish.

Will my taking part in the study be kept confidential?

The data will be kept confidential and no material, which could identify you personally, will be used in any reports on this study. The data will be stored and handled electronically and will only be accessed by myself and my supervisory team. I will ensure that the data is not altered nor accessed by unauthorized users. The data will be kept for the course of the study (expected end date: October 2019) and then deleted.

What will happen to the results of the project? The results will appear in the researcher's thesis and may be published in the form of academic paper and/or book chapter. You can ask for a summary of the results by ticking the relevant box in the Participant Consent Form below.

What are the possible benefits and disadvantages of taking part?

The intervention aims for an improvement of your listening skills, better awareness of how English intonation works and better strategies as listeners and communicators to enhance your social interactions with other speakers of English, including native speakers. Your taking part in the study will potentially enhance your learning experience in the UK, in the short and longer term.

Participating in the study will also involve that you will have to make yourself available and respect the times set for individual sessions and answering questionnaires. The study will take 5 and a half hours of your time between July 2017 and June 2018.

Who is organising and funding the research?

The research is organised by the University of Brighton and funded by the researcher herself.

What if there is a problem?

If there is any problem related to the study, please use the contact details below. Any issues or concerns will be addressed.

Who do I contact for more information or if I have concerns about the study?

Ms Pauline Madella
p.madella@brighton.ac.uk
p.madella@surrey.ac.uk

or

Mr Gavin Floater
g.floater@surrey.ac.uk

Mrs Cathy Howard
cathy.howard@surrey.ac.uk

Please also feel free to contact my PhD supervisor at the University of Brighton,
Dr Tim Wharton: t.wharton@brighton.ac.uk

Who has reviewed the study?

The study has been reviewed and approved by the University of Brighton College of Arts and Humanities Research Ethics Committee.

Participant Consent Form – main group



This form will let us know whether you want to take part in the project, that you know what is involved, and that the details of the study have been fully explained to you.

I agree to take part in this research which is to assess and improve both my perception and production of English intonation for specific communicative purposes.	Yes	No
The researcher has explained to my satisfaction the purpose, principles and procedures of the study and the possible benefits and disadvantages involved.	Yes	No
I have read the information sheet and I have had the opportunity to ask questions. I understand the purpose, principles, and procedures of the study and the possible benefits and disadvantages involved.	Yes	No
I am aware that I will be required to answer three questionnaires and attend three individual sessions in which I will be asked to answer listening comprehension questions, report to the researcher the language forms I will have noticed, and put it into practice in speaking.	Yes	No

I am also aware that I will be audio recorded using the speech analysis programme *Praat* for its acoustic descriptions as part of the third individual session. Yes No

I understand how the data collected will be used, and that any confidential information will be seen only by the researcher and her team and will not be revealed to anyone else. Yes No

I understand that I am free to withdraw from the study at any time without giving a reason and without incurring consequences from doing so. Yes No

I wish to receive a summary of the results from the study. Yes No

Declaration by participant:

I hereby consent to take part in this study.

Participant's name (please print):

Signature:

Date:

Declaration by researcher:

I have given a verbal explanation of the research project to the participant and have answered the participant's questions about it.

I believe that the participant understands the study and has given informed consent to participate.

Researcher's name:

Signature:

Date:

Participation Information Sheet – control group



Study topic: *‘Researching the communicative role of intonation in English and how to teach it to Chinese learners’*

Institution(s): **University of Brighton**
and University of Surrey

Lead
investigator: **Ms Pauline Madella**

I would like to invite you to take part in my research study on the communicative role of intonation in English. Before you decide whether you would like to participate, I would like you to understand (a) why the research is being done and (b) what it will involve for you. I will go through the information sheet with you and answer any questions you have. This should take about twenty minutes. Talk to others about the study if you wish, and please ask me if there is anything that is not clear. You will be given time to think about whether you wish to take part before making a decision and may take this sheet away with you. You do not have to decide today whether or not you will participate in this study, and whether or not you do is entirely your choice. If you do not want to take part, you do not have to give a reason. If you do want to take part now, but change your mind later, you can withdraw from the study at any time and asked for the data provided not to be used.

This Participant Information Sheet will help you decide if you would like to participate. It sets out why I am doing the study, what your participation would involve, what the benefits and disadvantages to you might be, and what would happen after the study ends.

If you agree to take part, you will be asked to sign the Participant Consent Form on the last page of this document. You will be given a copy of both the Participant Information Sheet and the Participant Consent Form to keep.

What is the purpose of the study?

The intonation systems of Mandarin Chinese and English intonation are significantly different: Mandarin Chinese is known as a tone language while English is an intonation language. For that reason, Chinese learners of English cannot always perceive English intonation. However, intonation in English is highly communicative since it can tell us about the speaker's intentions, and therefore learning English must involve learning how to interpret intonation. The purpose of the study is therefore to enhance the participants' listening abilities and communication skills through enhancing their perception (and subsequent production) of English intonation. The outcome of the research will contribute to studies on the effectiveness of techniques for enhancing L2 learners' inferential abilities and interpretive strategies, and studies researching the communicative role of intonation in particular.

What will my participation in the study involve?

Why have I been invited to participate? You have been invited to participate in the study because you speak Mandarin Chinese as your first language, you are at Master's level, and you have no prior study abroad experience in the UK.

What is expected from the participant? As a participant, you will be asked to answer two questionnaires on the use of intonation in English: one in July 2017, and the other in September 2017.

The questionnaire invites you to question yourself on the way intonation works in English, on your strategies as a listener and speaker of English, and on the communicative effects of intonation.

What are my rights?

What will happen if I don't want to carry on with the study? You can withdraw from the study at any time without giving any reason for doing so. You can ask for the data already provided to be deleted if you wish.

Will my taking part in the study be kept confidential?

The data will be kept confidential and no material, which could identify you personally, will be used in any reports on this study. The data will be stored and handled electronically and will only be accessed by myself and my supervisory team. I will ensure that the data is not altered nor accessed by unauthorized users. The data will be kept for the course of the study (expected end date: October 2019) and then deleted.

What will happen to the results of the project? The results will appear in the researcher's thesis and may be published in the form of academic paper and/or book chapter. You can ask for a summary of the results using the Participant Consent Form below.

What are the possible benefits and disadvantages of taking part?

The research project promotes self-reflection and better awareness of how English intonation works and of the strategies that you use as an L2 listener and speaker. Your taking part in the study will potentially help you reflect on the strategies that you will have developed through your learning and social experience in the UK.

Participating in the study will involve that you will have to make yourself available and answer the questionnaires in June and September 2017. Your participation will take one hour of your time.

Who is organising and funding the research?

The research is organised by the University of Brighton and funded by the researcher herself.

What if there is a problem?

If there is any problem related to the study, please use the contact details below. Any issues or concerns will be addressed.

Who do I contact for more information or if I have concerns about the study?

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or

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Please also feel free to contact my PhD supervisor at the University of Brighton,
Dr Tim Wharton: t.wharton@brighton.ac.uk

Who has reviewed the study?

The study has been reviewed and approved by the University of Brighton College of Arts and Humanities Research Ethics Committee.

Participant Consent Form – control group



This form will let us know whether you want to take part in the project, that you know what is involved, and that the details of the study have been fully explained to you.

I agree to take part in this research which is to assess my use of intonation in English and my listening and speaking strategies as an L2 learner.	Yes	No
The researcher has explained to my satisfaction the purpose, principles and procedures of the study and the possible benefits and disadvantages involved.	Yes	No
I have read the information sheet and I have had the opportunity to ask questions. I understand the purpose, principles, and procedures of the study and the possible benefits and disadvantages involved.	Yes	No
I am aware that I will be required to answer two questionnaires, which will invite me to question myself on the way English intonation works, on my strategies as a listener and speaker of L2 English, and on the communicative effects of English intonation.	Yes	No

I understand how the data collected will be used, and that any confidential information will be seen only by the researcher and her team and will not be revealed to anyone else. Yes No

I understand that I am free to withdraw from the study at any time without giving a reason and without incurring consequences from doing so. Yes No

I wish to receive a summary of the results from the study. Yes No

Declaration by participant:

I hereby consent to take part in this study.

Participant's name (please print):

Signature:

Date:

Declaration by researcher:

I have given a verbal explanation of the research project to the participant and have answered the participant's questions about it.

I believe that the participant understands the study and has given informed consent to participate.

Researcher's name:

Signature:

Date:

Appendix Three: Dialogue

Speaker A (SA) and Speaker B (SB):

SA Shame √ John wasn't at the party |

SB He \ was at the party | Didn't you / see him? |

SA John √ Smith? |

SB \ No | \ tall John | John \ Oliver | √ I saw him | didn't / you? |

SA I saw his √ brother | but I didn't think √ he was there |

SB His brother \ wasn't there | His \ sister was |

SA Yes, I √ spoke to her | **Is she trying to lose / weight?** |

SB She √ was |

SA √ Jay wasn't there, then? |

SB He \ wasn't | \ no | but Jay isn't √ John's brother | He's \ Tom's
brother |

SA Would you like an / apple? |

SB I'd love a √ pear | Would √ you like an apple? |

SA I'd \ love one |

SB Is Tom's address 101 √ Edward Street? |

SA It's √ 201 | \ James Street |

Appendix Four: Ethical approval letter and letter of support

24 May 2017

Dear Pauline

Thank you for your resubmission to the College Research Ethics Committee for the College of Arts and Humanities at the University of Brighton.

The committee feel you have now addressed all the issues raised and are happy to offer a favourable ethical opinion for this study.

Favourable ethical opinion is given on the basis of a project end date of 02/10/2019. If you need to request an extension, please contact the CREC secretary. Please note that the decisions of the committee are made on the basis of the information provided in your application. The CREC must be informed of any changes to the research process after a favourable ethical opinion has been given. Tier 2 research that is conducted without having been reviewed by the committee is not covered by the University research insurance

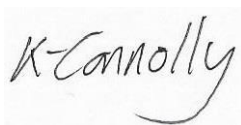
cover. If you need to make changes to your proposal, please complete and submit a change notification form in order that the CREC can determine whether the changes will necessitate any further ethical review. The form is available at:

<https://staff.brighton.ac.uk/ease/ro/CREC%20Published%20Documents/CREC%20change%20notification%20form.docx>

Once your research has been completed, please could you fill in a brief 'end of project report form' that can be found on the same website. Finally please could I ask that you flag up any unexpected ethical issues, and report immediately any serious adverse events that arise during the conduct of this study.

We wish you all the best with your research and hope that your research study is successful. If the CREC can be of further assistance with your study, please contact us again.

Best wishes



Kate Connolly
On behalf of the Arts & Humanities College Research Ethics Committee

Copy: Dr Tim Wharton (email)

Ms Pauline Madella
1 Chapel Terrace,
Brighton,
Sussex,
BN2 1HB

20th April 2017

Dear Pauline

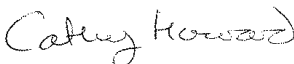
Research project

I am writing to confirm our support for your research project using University of Surrey Pre-sessional students as participants in your study in summer 2017. This is subject to you providing evidence of ethical approval from the University of Brighton. It is understood that the pre- and post-test questionnaires, individual input sessions and recall interviews will take place outside timetabled class time. If you wish to conduct any of these activities during normal working hours (9.00 – 17.00 Monday – Friday) you will need to seek specific approval from your course coordinator. Please provide copies of all documents you plan to use with the students before you circulate them.

I trust that this letter provides the evidence you require in order to gain ethical approval for your research project and wish you every success with it.

With best wishes

Yours sincerely



Cathy Howard
Subject Leader – English for Academic Purposes



Appendix Five: One role of intonation is...: main and control groups' pre- and post-test responses

Pre-test responses: main group One role of intonation in English is to...	Post-test responses: main group One role of intonation in English is to...
Attract listener when some points come out Emphasise important information Distinguish people's hometown Knowing if speaker is asking a question Help others to understand with some simple words Express feelings Show emotion: question, excitement, doubt Express one's willingness Help other to understand with some simple words Express the feeling Tell people about your feeling and emotion Know what is important in chat Understand meaning clearly Express the speaker's attitude	Express main idea, correct answer Attract listener attention Help me find important words Let people who are listening know meaning of words Emphasise the important information and correct answers Make meaning clear Highlight and catch the important information Emphasise important information and express one's opinion Focus on key words With body-language to explain main idea Help us identify different information Listen/ highlight point in the sentences Stress key information Let other know where she/he should pay attention to
Pre-test responses: control group One role of intonation in English is to...	Post-test responses: control group One role of intonation in English is to...
Help me to improve my accent Remain the important information Chat with others from other countries Emphasise some important information Help me understand and communicate Help me understand the meaning of sentence Understand other people's emotion Help me improve my English skills Question sentences Help me speak more comfortable Emphasise what you want to express Sound like local people Ask questions Get some information	Express himself Show speaker's attitude Help people realise emotions of speaker Emphasise some key points Help me know the emotion of the speaker Stress key points Know the stress of words and sounds Emphasise and help listener understanding Highlight something Put stress on something Show emotion Emphasise important words Speak more like a native speaker Communicate more fluently

Appendix Six: Main participants' responses at stage 2

Participants' qualitative responses at stage 1	Participants' qualitative responses at stage 2
<p>Skylar A. Man surprised that he was B. She was trying. For now, it's no C. Answer is no but answer to question is yes (he didn't)</p> <p>Bill A. He wasn't B. Yes C. \ Wasn't = no</p> <p>Cicy A. Was B. She \ was C. Yes, he wasn't</p> <p>Eason A. Yes B. Was C. Yes, he wasn't there</p> <p>Li A. Wasn't B. Before, not now C. Doesn't know</p> <p>Kevin A. Was B. She was = yes C. No - he says no</p> <p>Danica A. No</p>	<p>Skylar A. Questioning, surprised, he wants to emphasise his questioning B. Face – not now, before C. No, agrees with her</p> <p>Bill A. He wasn't – suspicious face. Didn't you see him? B. No – face= it's a secret C. Yes, he wasn't</p> <p>Cicy A. No – face B. She \ was. His face shows she didn't succeed C. Yes, he wasn't</p> <p>Eason A. Yes - Surprised she didn't see him – face looks negative B. She was C. Yes, he wasn't</p> <p>Li A. He \ was at the party B. She \ was, before – no meaning C. No</p> <p>Kevin A. Wasn't (face=no) B. She was C. Yes, he wasn't</p> <p>Danica A. No</p>

- B. Yes
- C. He wasn't, no = no

Joyce

- A. Was
- B. She was
- C. He was – confused with previous question

Mengran

- A. He not → he was
- B. Yes
- C. Two not means yes

Zendric

- A. No
- B. She was
- C. Same as question → yes, he wasn't

Johnny

- A. Yes
- B. She was
- C. Yes, he wasn't

Yuyue

- A. Wasn't
- B. Not now
- C. Yes, he wasn't there

Shirley

- A. Yes
- B. Yes
- C. Wasn't – no = yes

Ruiping

- A. Was
- B. She was – past tense in question
- C. No meaning 'yes' he was there

- B. She \ was - tried but did not succeed
- C. No = he agrees with her

Joyce

- A. shake of head – (Yes) he was
- B. She was, yes – face expresses no
- C. He wasn't there = no

Mengran

- A. He \ was. Didn't you see him? Looks surprised because the woman didn't see him
- B. She \ was. Before, not now
- C. Jay wasn't → no, he wasn't → Yes, he wasn't

Zendric

- A. No – man shakes head
- B. Yes
- C. Yes = he thinks she's right – agrees with her

Johnny

- A. He was - surprised because she thought he wasn't
- B. She was – did in the past = no
- C. No he wasn't = no – if I agree I should say yes

Yuyue

- A. He \ was – meaning no
- B. She \ was, not now
- C. Yes, agrees

Shirley

- A. She: he wasn't; he: he was – shakes head
- B. No – face = she wanted to but gave up
- C. Yes, he wasn't

Ruiping

- A. Yes, he was – but shakes head
- B. Was means yes – face didn't agree
- C. No he wasn't no means Yes, he agrees

<p>Bryan A. Was B. Probably still, not sure C. No = he wasn't</p>	<p>Bryan A. No B. She \ was – no C. No he wasn't = Yes to her question – same answers</p>
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Appendix Seven: Illustrative quotes about stage 2 of the intervention

Participants	Theme 1: Importance of having access to visual cues as well as acoustic cues including sub-theme 1: The ‘more and better’ argument. and sub-theme 2: The interaction argument (i.e. prosody and gesture/facial expression interact)		Theme 2: implications of prosodic pointing for pragmatic, intention-oriented understanding	Theme 3: evidence of meta-cognition / meta-cognitive strategies
Skylar	‘With visuals I can better focus and understand’		‘to make your message clear’	
Bill	‘to explain more better’	‘Body can help pronounce’		
Cicy		‘Faces can help to stress’		‘If I know that I can learn easier’
Eason	‘I can get more information and more accurate information’		‘to know answer which one is correct’	

	from faces, b-l and intonation'			
Li			'to correct a point'	'I learned new ways, different modes, to do one thing'
Kevin	'b-l makes it clearer'		'to help others understand you'	
Danica	'it's easier to communicate'		'to let people understand your meaning'	
Joyce	'to better follow the information'	'intonation and b-l go together'		
Mengran			'To mean 'yes' or 'no'.	'It makes me want to communicate more'
Zendric			'Answering without using names'	

			‘Stress words according to different questions’	
Johnny			‘to emphasise my questioning’	‘1 st time I pay attention to head movement and nodding’
Yuyue		‘b-l and face expression at the same time as intonation’	‘to correct the meaning’	
Shirley			‘don’t need to say ‘yes/no’’ ‘to correct answer’	
Ruiping	<i>‘Why using gesture when listening?’</i>		‘different faces to express different ideas’	
Bryan		‘b-l and face expression together with intonation’	‘to help understand meaning’ ‘to help me understand others’	

			what they really want to tell me'	
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