COMMUNICATING ACADEMIC CONTENT TO INTERNATIONAL STUDENTS: INTERPLAY AND VARIATIONS IN THE USE OF VERBAL AND GESTURAL METAPHOR

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ABSTRACT. *It is important for university lecturers to be aware of the needs of international students studying at their universities and of the potential difficulties that they may face. One area of difficulty that these students experience relates to the use of metaphor by academics in lectures and seminars. As well as presenting problems, metaphors also have the potential to facilitate understanding and improve communication. By observing lecturers who have experience in conversation with international students we may learn useful lessons about how best to communicate with them using metaphor. In this study, we investigate how a lecturer from a Department of International Development made use of metaphor when presenting her work to two international students: one from her department and one from outside her department. The findings show that the verbal and the gestural metaphor appeared to serve a range of functions with the two different interlocutors.*

KEY WORDS. *Gestural metaphor, spoken academic discourse, metaphor and learning.*

RESUMEN. *Los profesores universitarios europeos deben ser conscientes de las necesidades y las posibles dificultades que los estudiantes internacionales tienen que afrontar. Uno de los aspectos del discurso académico hablado más problemático para tales alumnos es el uso de la metáfora, pese a su potencial para facilitar la comprensión y la comunicación. La observación de las conversaciones de los profesores con experiencia con alumnos extranjeros puede enseñarnos como mejorar la comunicación mediante el uso de la metáfora. En este estudio, se investiga como una profesora del Departamento de Desarrollo Internacional utilizó la metáfora al presentar su trabajo a dos de sus alumnos, uno de su departamento y otro de fuera. Los resultados muestran que la metáfora verbal y gestual cubrían una serie de funciones con ambos interlocutores. Se produjeron una gran variedad de similitudes y diferencias en ambos casos.*

PALABRAS CLAVE. *Metáfora gestual, discurso académico hablado, metáfora y aprendizaje.*

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1. INTRODUCTION

With increasing numbers of international students studying at European universities, it is important for university lecturers to be aware of their needs and the potential difficulties that they may experience. The first hurdle that most international students encounter when embarking upon their academic careers in the United Kingdom is the need to understand spoken English. This is often very different from the 'textbook' English that they have encountered in their English classes before coming to the UK. One of the characteristics of spoken English is 'rapid fade': students only get once chance to understand what is being said at the moment of utterance. Failure to understand spoken academic discourse in either lectures or tutorials can have a detrimental effect in terms of misunderstanding course content, homework or class work tasks.

One of the aspects of spoken academic discourse that has been shown to be particularly problematic for international students is the use of *metaphor* by academics (Littlemore 2001). Metaphor, in very general terms, involves describing one thing in terms of another, so one might treat the economy as a living organism in order to better understand how it works, which would lead to expressions such as 'a thriving industrial economy' (example from BofE, the 450-million word Bank of English corpus.). Metaphor is closely related to metonymy, which involves using one entity as a 'point of access' to another. So for example, one might use the word 'brain' to refer to 'intelligence', allowing us to say 'she was the alleged brain behind the fraud' (BofE). The main difference between metaphor and metonymy is that metaphor tends to relate two very different areas of experience (e.g. 'economics' and 'living organisms'), whereas metonymy tends to involve relationships between related entities (e.g. 'brains' and 'intelligence'). However, research has shown that the distinction between them is not as clear cut as this, and that metaphor can often shade into metonymy and vice versa (Barnden 2010). Moreover, the same expression can be used metaphorically, metonymically and literally in the same piece of discourse (Cameron 2003, 2008). Metaphor and metonymy are particularly important in academic discourse as they are often involved in theory constitution and the construal of abstract concepts (Steen et al. 2010). The focus in this chapter is on metaphor, but we occasionally mention metonymy where it co-occurs with metaphor.

Metaphors have been found to be prevalent in both spoken and written academic discourse in areas such as economics (Boers 2000a, 2000b), politics (Mio 1996), architecture (Caballero 2003) and business (Arleo 2000; Morgan 1996). Different academic disciplines often employ metaphors specific to their discourse communities and research paradigms and lecturers also use metaphor to organize their discourse, frame problems, change topic, or for evaluative purposes (Koester 2000).

The use of metaphor has been shown to cause significant problems of comprehension for international students, and may contribute to underachievement in their academic work. One reason for these difficulties is the lack of common ground between the speakers. Metaphor comprehension often requires shared cultural knowledge

that is closely related to one's linguistic background and speakers from different language backgrounds often lack this shared knowledge. Littlemore (2001) and Littlemore et al. (2011) found that the use of metaphor and metonymy in academic lectures presented a variety of problems to students whose first language was not English. Metaphor and metonymy accounted for the majority of the misunderstood items in both studies, and to a large extent, the students were unaware of their misunderstandings. One reason for this was that, for both linguistic and cultural reasons, the students lacked sufficient 'shared knowledge' to understand the metaphors and metonymies (Danesi 1995). Veale and Keane (1994) explain this phenomenon in terms of 'imparted ground', which they define in the following way: "The set of associations shared by tenor and vehicle in the mental model of the speaker but not in the mental model of the listener" (ibid.: 2).

By 'vehicle' they mean the term that is used to express the concept, so in the economics metaphor mentioned above, this would be the 'living organism'. By 'tenor' they mean the topic that is being talked about, so in the above example, this would be the economy. The sets of associations that different interlocutors have for these different parts of the metaphor may vary according to their cultural and linguistic backgrounds. Because of these subtle differences in the sets of associations that people from different linguistic and cultural backgrounds have, it is understandable that there will be miscommunication at times. Littlemore (2003) identified a number of cases in which international students misinterpreted metaphors used by their lecturers, largely because of differences in their cultural expectations.

While this issue has been discussed so far from a "deficit" point of view in which it is assumed that metaphor poses a barrier to communication, this may not always be the case. Previous research has shown that figurative language, which includes idioms, metaphors and hyperbole, plays an important role in the building and maintenance of interpersonal relationships. Carter (2004) found that figurative devices used in creative verbal play are frequently used to building solidarity and even intimacy between participants in spoken interactions. Cameron (2007) showed that metaphors played a key role in reconciliation talks between former IRA terrorists and their victims. In workplace and professional discourse, idioms and other figurative or creative devices seem to play a particularly important role in collaborative problem-solving (Carter 2004; Koester 2006). If, as these studies have shown, figurative language plays such a key role in building solidarity and common ground in spoken interaction, it is possible that creative uses of figurative language, involving, for example, novel metaphor, will also be found to perform such interpersonal functions in cross-cultural interactions in university settings. It thus makes sense to view metaphor both from a 'negative' and a 'positive' perspective.

Recent work in the area of metaphor studies has shown that metaphor is pervasive in gesture as well as language. There is an increasing body of evidence which supports the hypothesis that gesture plays an important role in the portrayal of abstract concepts through metaphor (Calbris 2009; McNeill 2005; Sweetser 2006; Williams 2009). Metaphoric gestures can be used to support linguistic metaphors. For example, in her study of the gestures used by linguistics lecturers, Mittelberg (2008) found that speakers frequently

used gestures corresponding to the source domains of the metaphors used. For example, when one of the lecturers was describing a sentence as a 'string of words', she iconically gestured objects moving along an imaginary string. When another lecturer talked about 'emergent grammar' her gesture involved her right hand gradually emerging (whilst rotating) from a shallow cup formed by her left hand. Because these gestures correspond closely to the linguistic metaphors they can be described as gestural metaphors. Gestural metaphors do not always have to correspond exactly to linguistic metaphors. Cienki (2008: 14-15) cites a case where a speaker was talking about truth and falsehood. When producing the utterance: 'Either you're right you're wrong black or white you know', she made a series of chopping gestures with her right hand moving from left to right. As Cienki points out that, this example combines the use of a 'colour metaphor' in the verbal mode with a 'spatial metaphor' in the gestural mode. Apart from providing insights into the way people use metaphor to conceptualize abstract concepts (Cienki and Müller 2008), gesture can also shed light on the role of metaphor as a dynamic activity, heavily involved in the process of formulating thoughts. The role of gesture in conceptualizing information for speaking is encapsulated in Kita's (2000) 'information packaging hypothesis'. According to this hypothesis, speakers use gesture to help them conceptualize and express abstract concepts, which is why they gesture more when describing information that is difficult to conceptualize than when describing information that is easy to conceptualize.

As far as we know, there exist no studies of lecturer-student interaction that look specifically at the way academics use and/or adapt their use of metaphor and gesture when engaged in tutoring international students. Nor are there any studies to date of the ways in which lecturers vary their use of metaphor according to the linguistic and cultural background of the students. It seems likely that academics dealing with students with their own or a different L1 background will deploy verbal and gestural modes differently. Likewise, students may be more or less active in noticing and seeking ways to solve potential misunderstandings.

2. THE STUDY

In this paper, we describe a study in which we examined the use of verbal and gestural metaphor by a lecturer who is experienced in communicating with international students. By doing so, we hope to gain insight into the ways in which such a lecturer deploys metaphor in order to develop the student's understanding of abstract academic concepts and to build supportive relationships with those students. We look at an exchange with a student from her own department (International Development) and an exchange with a student from a different department (English). The focus is on the interplay between verbal and gestural metaphor in the different exchanges. As we said above, we do not see the use of metaphor simply as a 'problem' in cross-linguistic communication, but also as a way of enhancing comprehension and of helping speakers from different backgrounds to understand one another more deeply. As well as exploring the metaphors used by the lecturer herself, we also look at those that were used by the two students.

3. METHODOLOGY

This study investigated how a lecturer from an International Development Department at a British university explained two management models to two different male post graduate students

- A non-native speaker of English from the same department (a Kazakhstani post-graduate student from the International Development Department)
- A non-native speaker of English from outside the lecturer's department (a Taiwanese post-graduate student from the English Department)

It formed part of a larger study in which the lecturer also explained the models to two native speakers of English (one from within her department and one from outside it). Although we do not discuss the conversations with the native speakers explicitly in this chapter, we do at times refer to differences between the exchanges discussed here and the native speaker exchanges, where this is relevant to our argument. Analyses of various parts of this data set, which have a different theoretical focus, can be found in Deignan et al. (2013) and Littlemore (2012).

The lecturer was made aware of the status of each student. After each explanation, the student was asked to explain the theory back to the lecturer. Video recordings were made of the two exchanges. Neither of the students was familiar with the models and none of the participants knew what the aims of the study were when they were being videoed. The language used in the exchanges was transcribed using intonation units. Words that were uttered with a particular emphasis or volume are transcribed in capital letters and the gestures are described in a column down the right hand side. Any words that were being uttered at the time of the gesture are presented in bold typeface. When the gestures occurred between words, an ^ is inserted. Metaphorically-used words are underlined. The Pragglejaz (2007) metaphor identification technique was used to identify potentially metaphorically-used words. This technique involves identifying all the lexical items in the text and then for each lexical item, establishing its meaning in context. The researcher must then establish whether the lexical item has a more basic contemporary meaning in other contexts and if so, whether its meaning in the text can be understood in comparison with this more basic meaning. Basic meanings can be more concrete, related to bodily action, more precise or historically older. If this is the case then the lexical item is marked as being 'potentially metaphorically-used'. Potentially metonymically-used words were not identified systematically throughout the data but where metonymy co-occurred with metaphor it is commented on in the analysis. Potential metonymies were defined as any situation where the words or gestures expressed a concept that was related to, but not identical to, the intended concepts. Potentially metonymically-used words are underlined with a dotted line in the extracts below.

Once the potentially metaphorically-used words had been identified, we turned our attention to the lecturer's use of gesture. Our category of 'potentially metaphorical gestures' included any gestures that were co-expressive with, or complementary to, verbal metaphors, and any gestures that referred to a source domain that was not present in the text. The ways in which the two students echoed the lecturer's verbal and gestural metaphor

were also studied. One of the main aims was to identify the additional information that gesture could provide about the nature and functions of the verbal metaphors that were used in the two exchanges. A search was then conducted for features of metaphor use (in both language and gesture) that appeared to be characteristic of these exchanges (in comparison with the two exchanges that had been conducted with the native speakers). The focus was on the particular roles that the metaphor appeared to be playing, and special attention was paid to the ways in which the two interlocutors traded metaphors, in both language and gesture, and the extent to which they appropriated one another's verbal and gestural metaphors in order to co-construct meanings and share their understanding of the main ideas. The observations regarding verbal and gestural metaphor are discussed below.

After the recordings had been made and transcribed, the lecturer was invited to view the videos and transcripts and to comment on her use of metaphor. The quality of her insights and explanations, as well as her extensive cross-cultural awareness meant that she was able to add an extra dimension to the analysis which would have been unobtainable by the initial researchers. Not only did her insights show how existing metaphor theories might be applied to the data, they also showed how the data might be used to develop work in the field of metaphor. She was therefore invited to co-author the paper in the form of a 'participant-researcher'. This is an extension of the more widely known research practice of 'participant observation' (Atkinson et al. 1994), where the observer is actually involved in the activity or becomes a member of the discourse community in order to observe it at close hand. This approach was highly advantageous in the analysis as the participant's areas of expertise clearly complemented those of the initial researchers.

4. FINDINGS

In this section, we discuss the ways in which the lecturer used verbal and gestural metaphor with each of the speakers. In many ways, it is too simplistic to say that both of the students were non-native speakers and that one was from 'inside' the Department' and the other was from 'outside', the department, and explain all of the use of verbal and gestural metaphor in these terms. As with any exchange between human beings, many more factors were at play in determining the use of language between the students. We therefore begin by providing some background information on the ways in which the lecturer and the interlocutors viewed the exchanges. We take these views into account when analyzing the use of verbal and gestural metaphor in the two exchanges. In our analysis, we focus on the use of verbal and gestural metaphor by the different interlocutors, and explore the ways in which verbal and gestural metaphors were used to co-construct meaning and develop shared understanding.

Before going on to describe the two different exchanges, we would like to briefly describe the two models that the lecturer presented in the tutorials. These were Quinn et al's (2001) 'competing values framework' and Stewart's (1999) 'fried egg' model of responsibility. The lecturer prepared for the session by drawing a diagram of each model on a flipchart, before the arrival of the interlocutors:
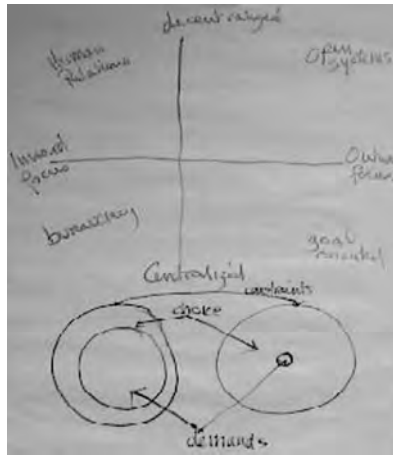
Figure 1. *The two diagrams drawn by the lecturer on the flip chart in preparation for the sessions (The words in the top diagram, starting at the top and moving clockwise are: 'decentralized', 'open systems', 'outward focus', 'goal-oriented', 'centralized', 'bureaucracy', 'inward focus', and 'human relations'. The words in the bottom diagram are 'constraints', 'choice' and 'demands').*

The 'competing values framework' is a way of describing different types of organisations in terms of how centralized or decentralized they are, and how inward or outward-focused they are. The combination of these two axes gives rise to four quadrants which are labelled 'bureaucracy', 'human relations', open systems' and 'goal oriented'. Each of these corresponds to a particular type of organisation. In line with conceptual metaphor theory and visual semiotics, there is movement in the diagram from bottom left to top right as the system becomes increasingly open and outward looking. With both students, the lecturer personified these management styles by comparing each one to one of her previous heads of department. Thus there was a 'bureaucracy' head, a 'human relations' head, an 'open systems' head and 'goal oriented' head.

The 'fried eggs' model of responsibility looks at the same issue from the perspective of someone working within an organisation. Their working conditions are illustrated through the picture of two fried eggs. In each case, the 'yolk' of the egg corresponds to the demands that their boss makes on them and the 'white' corresponds to the degree of freedom that they are allowed within the organisation.

The findings from the wider study, which compared the lecturer's use of verbal and gestural metaphor with the native and non-native speakers are reported in the Littlemore (2012). The main findings from that study were that, compared with the exchanges with the native speakers in the study, the lecturer used fewer verbal metaphors, but they were supported with stronger pedagogical gestures. With the native speakers, her gestures tended to be more evaluative. In a study of differences in lecturer's use of metaphor with the two native speaker interlocutors (Deignan et al, 2013), we found that many of the differences could be explained in terms of genre and register. In this study, we focus on

the lecturer's use of verbal and gestural metaphor with the non-native speaking students in order to identify features that may serve as examples of 'good practice' for university lecturers who are embarking on careers that will involve teaching international students. Input from the lecturer herself provides valuable background to the analysis.

5. THE EXCHANGE OF THE NON-NATIVE SPEAKER FROM WITHIN THE DEPARTMENT

When asked about this exchange, the lecturer revealed that although the student was studying in her department she had only taught him once, so she did not know him very well. Moreover, she ascertained early on in the conversation with this student that he was a Presidential Scholar from Kazakhstan. This is a highly prestigious programme, funded by the Kazakhstani government, which attracts excellent students. It is one of the aims of the university and the International Development Department to maximize the number of students that it attracts through this scheme. The lecturer therefore felt that it was important to make an extra effort with this student. She claimed that it had made her slightly more attentive to what she was saying and was keen to ensure that he was following the thread. She also claimed that it had had an effect on her use of gesture, making her use more expansive gestures than she would otherwise have used.

Her use of expansive gestures is clear from the outset, particularly when compared with her use of gestures when speaking to native speakers in the wider study (see Littlemore, 2012). These exaggerated gestures often reflected the source domains of the metaphors that she used. For example, in this first extract, she emphasized the 'internal focus' by pointing her right forefinger down towards the floor (figure 2). As with other examples of this type, she did this just before producing the words themselves:

Figure 2. *The lecturer emphasises the 'internal focus'.*

Lecturer (1.59)	and this one down here which is very centralised with a-a very kind of ^ internal **focus**…	exaggeratedly points R forefinger downwards from the centre of the body

When asked about this particular gesture, the lecturer commented that she was indeed putting in more 'effort' with him and was, to a certain extent, 'acting' at this point. When she observed this particular exchange, the lecturer noted that her behavior did not mirror that of the student. Other examples of these 'exaggerated' gestures include the following, where she illustrated 'freedom' with an expansive hand movement and 'closeness' with a kind of hugging gesture (figure 3).

Figure 3. *The lecturer: Illustrating freedom and closeness*.

| Lecturer 2.20 | we think of it as the human relations er type of culture where... people <u>have</u> a lot of freedom to do what they want… It's not so centralised.. They've got **a lot of freedom** | |
| | But they're very **<u>close</u>** to each other | Both hands move rapidly upwards and outwards palms opening Arms coming together, hands overlapping |

This is a good example of 'dramatic contrast', a rhetorical technique in which two contrasting ideas are juxtaposed for maximum impact. Although the contrast is not necessarily clear in the language, it is very clear in the gestures. Thus the gestures in this sequence contribute to the overall coherence of the discourse by emphasizing the antonymic relationship between the two ideas. In a way the metaphoric gestures here are serving an important discourse function in that they provide an extra level of coherence to the overall message. This use of gesture to provide coherence has been observed in the gesture literature more generally (Lascarides and Stone 2009).

Other 'pedagogic' gestures appeared to accompany potentially difficult vocabulary items, such as 'underpinning' in the following example (figure 4).

Figure 4. *Other pedagogic gestures*.

Lecturer 3.58	motivations… motivations er involved **<u>underpinning</u>** these different quadrants	RH palm up, claw shape, fingers move in and out twice

The gesture in this example enhances the dynamic nature of the metaphor as it involves movement. 'Underpinning' could be read either as a stationary state or as a dynamic process. This particular gesture highlights its dynamic nature.

A somewhat exaggerated gesture that the lecturer used frequently with all four interlocutors involved removal of her glasses to represent 'looking out' and the placing of her glasses on the end of her nose to represent 'close detailed work'. Both referred to both literal and metaphorical concepts. For example, the removal of her glasses co-occurred with highly metaphorical uses of language, such as 'outward-looking organizations', as well as somewhat less metaphorical usages, such as 'looking for jobs' (figure 5) in the following extract with this student:

Figure 5. *The lecturer: Representing metaphorical concepts*.

Lecturer 7.41	So if we're <u>looking at</u> organisations **^**and if you're thinking about **<u>looking for</u> jobs** it's quite a nice idea to think about what sort of organization you'd want to be working for	Removes glasses Spreads hands wide, palms up

This use of 'looking' is clearly less metaphorical than 'outward-looking organisations' but it is not as literal as say 'looking for a pen under the desk'. It highlights a salient aspect of the job-seeking process, and might thus be said to be a kind of part-for whole metonymy. However, a key point to bear in mind is that this is a conventional, and indeed the most common, way of referring to the act of trying to find a job, so it cannot be described as a 'novel' metaphor or metonymy. On the other hand, it does appear to have been somewhat consciously used, as we can see from her gesture. The removal of the glasses is a very deliberate act. The lecturer removed them well in advance of the expression itself, and paused slightly before saying 'looking for jobs'.

When asked about the removal of her glasses, the lecturer made reference to her previous experience working as an administrator with a travelling theatre company. During this time, she had spent many hours observing actors being directed, and had at times done small pieces of acting herself. While doing this work, she had noticed that props such as glasses, cigarettes and pipes were frequently used to say something about a person's character or to control the nature of the interaction between two characters. The use of props in this way is known in the theatre as 'business'. Examples of 'business' include the fact that the removal of one's glasses can be used to indicate surprise, the placing of one's glasses on the table can indicate a desire to end the conversation, lighting one's pipe can stand for reflection. Arguably, 'business' constitutes a kind of metonymy in which a particular action, involving a particular prop, serves a function in the discourse which is related to, but which goes well beyond its literal sense. In the lecturer's words, the removal of one's glasses is a 'classic piece of business'. Although the lecturer had worked with a travelling theatre company, it was not in the capacity of an actor, but as an administrator. She believed however that by being exposed to so much acting, she had absorbed some of its principles. When asked if the removal of her glasses was a deliberate act, she claimed that sometimes she was aware of it, and sometimes not. This demonstrates the difficulties involved in identifying 'deliberate' versus 'non-deliberate' metaphor in the context of language and gesture in real time.

Another emphatic gesture was her use of 'fist-stamping' to emphasize the concepts of 'standardization' and 'control', as in the following example (figure 6):

Figure 6. *The lecturer: Emphatic gestures*.

Lecturer 4.00	So <u>this one here</u> Really <u>likes</u> to **standardize** and measure things It's about **security**	RH forms fist shape, moves emphatically downwards once RH forms fist shape, moves
		emphatically downwards several times
	<u>Keeping</u> everything **<u>under control</u>** <u>Keep</u> it safe <u>Keep</u> it stable	RH forms fist shape, moves emphatically downwards once

The expression 'so this one here really likes to standardize' is interesting from a methodological point of view. As we said above, the lecturer personified each of the management styles by comparing each one to one of her previous heads of department. So 'this one here' could correspond to a management style, or it could correspond to one of her bosses, or it could correspond to the type of boss (in general) who has this particular management style. It is impossible to tell from the transcript which of these three options is meant but if it is either of the last two then there is a metonymy involved and the word 'likes' is literal. If however, 'this one here' referring to a type of organisation then 'likes to' is a personification metaphor. This combination of 'potential metonymy' and 'potential personification' has been observed in other studies involving metaphor identification (Krennmayr 2011), and appears to be fairly widespread.

The gestures that she used at this point appeared to add an element of evaluation to the discourse. These 'stamping' gestures display an interesting further feature of the data. Although it was not the case 100% of the time, the lecturer had a tendency to favour her right hand when gesturing about things that she liked and her left hand when gesturing about things that she disapproved of. This is in line with gesture research showing that right handed individuals tend to favour their right hand when talking about positive things and their left hand when talking about negative things (Casasanto 2009). In this particular extract, she changed from her right hand to her left hand, which may indicate that she wanted to emphasize the negative element half way through. She also tended to gesture upwards when talking about positive things and downwards when talking about negative things, which is in line with Lakoff and Johnson's (1980) hypothesis that GOOD IS UP and BAD IS DOWN. When asked, she

commented that she was completely unaware of these left-right, up-down correlations and had no idea that they had appeared in her gestures. At this point, one of the authors pointed out to her that the diagram that she had presented on the flip chart also exhibited these correlations (the sorts of organizations that she most clearly approved of were displayed in the top right hand corner of the diagram, whereas those that she disapproved of appeared in the bottom left hand corner). Again, she had no idea that she had presented the organizations in this way, but agreed that on reflection, this is how she would normally present evaluative information in a visual format.

As for the student, he appeared to have remembered and reproduced the lecturer's gestures but he only did so towards the end of the discussion so this behaviour cannot really be described as 'echoing'. Here is an example (figures 7 and 8):

Figure 7. *The lecturer: Evaluative gestures*.

Lecturer (3.02)	the sort of organisation usually small ones where.. or er small teams who are VERY concerned with innovation.. <u>responding to</u> you know building **new** things <u>responding to</u> new trends etcetera.	RH sweeps outwards, palm open

Figure 8. *The student: Echoing gestures*.

Student 28.20	they er still mm how can I say, they're kind of <u>open</u> to innovations but still they value human culture I mean there's gonna be something **in the wind**	
		RH stretches upwards open claw

The fact that the student used similar gestures to the speaker when explaining the theories back to her could possibly indicate that he was working with similar underlying conceptual metaphors. On the other hand, it could equally have been the case that the student was imitating the lecturer's gestures in order to build rapport. The relationship-building function of imitation is well-attested in both spoken discourse (Tannen 1987) and in gesture (Echterhoff et al. 2009). What is interesting here is the fact that the student's gesture is slightly claw-shaped, which suggests that he may have been reaching out for something. This is slightly different from the gesture that had originally been used by the lecturer, suggesting that the student may have appropriated and elaborated it in order to make it his own.

Another gesture that the student used, which was similar to one used by the lecturer, was what might be described as a 'chopping' gesture (figure 9):

Figure 9. *The student: imitation gesture*.

Lecturer 5.28	If we think about er… <u>these</u> ideas again.. <u>down here</u> <u>you</u> need very **clear goals**, very **clear goals** <u>down here</u> because er it's all <u>about</u> performance it's <u>about</u> **SETTING** targets and **GO** FOR IT and **MAKE** MONEY and **UH** right?	 RH open palm facing inwards moves rapidly downwards Repeats gesture Repeats gesture Repeats gesture

The lecturer later interpreted this use of gesture as an attempt to indicate importance of clarity, firmness of purpose and direction. The student used this gesture much later on in the conversation to emphasize the rigidity of 'sticking to the rules'. The parallels are clear. There appears to be a mixed metaphor here if one looks closely at his language and his gesture and in line with Müller's (2008) predictions, the intersection between the 'chopping' and the 'sticking' sums up perfectly what it is that he is trying to convey both semantically and pragmatically (figure 10).

Figure 10. *The student's metaphorical gestures*.

Student 25.45	You got not, maybe fixed salary or rewards but at the same time <u>they</u> don't like innovations, <u>they</u> don't like new things… <u>they</u> are like mm <u>they</u> are like erm **stucked** <u>stick</u> to the **rules** and they don't erm it's actually it-if it is go if it <u>goes</u> er **further** that's not gonna be (inaudible word) bureaucracy, that's gonna be something different	 RH open palm facing inwards moves rapidly downwards LH open palm Straight hands coming together fingers pointing to each other, downward motion Hands sweeping outwards, palms open facing each other

In both of these cases, we need to be careful not to over-interpret the findings, as there was a considerable time lag between the lecturer's use of the gestures and the use of these gestures by the student. The similarities that we detected may simply have been a coincidence.

As for the student's own, idiosyncratic use of verbal and gestural metaphor, one noticeable phenomenon was his tendency to use a gesture that was suggestive of holding a small object whenever he was recalling an abstract noun, as we can see below in his attempt to recall 'techniques' (figure 11).

Figure 11. *The student: recalling abstract nouns*.

Student 10.04	like in keeping us with erm how can I say^ TECHNIQUES, EFFORTS it's really helpful for working	Hands facing each other fingers apart palms slightly curved, facing slightly downwards and inwards

It has been suggested that the gestures employed by speakers of English sometimes embody the idea that abstract concepts exist within bounded containers which can be held in the hand (McNeill 2005; Mittelberg 2008). However, research suggests that the ontological metaphor of '*abstract ideas existing within physical containers*' may not be universal. For example, Yu (2000) has suggested that for Chinese speakers, abstract ideas tend to be conceptualized as 'substances without form' (ibid.) and that the Chinese therefore tend not to use handholding gestures to convey abstract concepts. To the best of our knowledge, no research has been conducted on the presence of this conceptual metaphor in the language and gestures used by Kazakhstani-speakers. Nevertheless, the gesture used by this student is somewhat loose and may be indicative of this conceptual metaphor. The fact that he employs the gesture before speaking the actual words may indicate that he is using it to help package his ideas, in the way that was suggested by Kita (2000).

This gesture contrasts clearly with his use of movement gesture to indicate 'flow' (figure 12):

Figure 12. *The student: Gesture indicative of conceptual metaphor.*

Student 1.21	But still I think that may be environment is challenging And <u>here</u> I think the **^ the <u>flow</u>** of employees Is **really <u>high</u>** they **<u>change</u>**	RH loops outwards away from body RH index finger extended moving away from and towards body RH flaps backwards and forwards

These gestures lend a degree of support to Kita's (2000) 'information packaging' hypothesis. According to this hypothesis, speakers use gestures to help them package abstract information into verbal forms. The student's use of a 'small object' gesture to indicate a noun and a movement gesture to indicate a verb suggest that he might be using these gestures to recall the noun and verb forms. The fact that in both cases the gestures appear before the words themselves suggests that the gestures are involved in the thought processes. They may also have been being used as a kind of stalling technique or as a kind of communication strategy to help him get his message across, as is found in Gullberg's (1998, 2008) work on the use of gesture by second language learners. Finally, these findings suggest a role for gesture in Swain's (1995) 'pushed output' hypothesis, in which she argues that producing the target language helps students to learn it as it puts them in a position where they have to force their ideas into new sets of expressions. This students appears to have used gesture to help him do this (see Littlemore 2009).

6. The exchange with the non-native speaker from outside the International Development Department

When reporting on her exchange with the student from outside the department, the lecturer commented that she thought his English was rather weak and that she would have to explain things relatively slowly and carefully. However, she did claim that a certain bond had developed between them by the end of the exchange and that she had found him easy

to get on with. The student reported that he had felt a little nervous when the exchange began but that the lecturer had put him at ease early on with her sense of humour and that he had found the material reasonably easy to understand. He had not viewed the exchange as being very formal but was somewhat anxious about the fact that he did not know what the activity was for. He claimed not to have been inhibited by the camera.

As with the other student, the lecturer used a large number of the sorts of exaggerated 'pedagogic' gestures that she had not used with the native speakers. In the following extract, we can see how the gestures used by the lecturer emphasised the vehicles of the metaphors used (figure 13). The metaphorical 'holding on' to the money is accompanied by a tight hand clasp, the 'investing' is accompanied by an outward motion involving both hands which contains elements of putting things in a box. The 'pulling in' of money is accompanied by a pulling action by the right hand.

Figure 13. *The lecturer: Gestures emphasising the vehicles of metaphor.*

Lecturer 4.19	I don't mean **hold on** to the money I mean you know	Tight holding gesture (both hands)
	invest et cetera. they have to be quite politically astute. and good at getting grants .. and ..	Both hands move outwards from chest, palms open
	pulling in the money .. all that sort of thing.	RH forms claw and is pulled back towards the body

The lecturer reported that she had deliberately employed a number of particular verbal metaphors because experience had taught her that they were particularly accessible to Chinese students. She claimed that they were in her 'toolkit of teaching metaphors' that she regularly employed. One such metaphor was the 'energy' metaphor. In this metaphor, there is an awareness of the fact that 'energy is money' and 'money is energy' with the lecturer reporting after the study that you keep on turning it round, otherwise if it stops on one continent or another it stops for good. The metaphor is thought to have come from the Chinese idea of 'yin and yang', where a constant flow, constant change, and movement are required (figure 14).

Figure 14. *The 'energy' metaphor.*

Lecturer 10.23	it was like <u>money is sort of</u> **energy** .. you know ..	Hands closed together
Student	Hm hm (nodding)	
Lecturer	and if you **keep it moving round**	Expansive waving of both hands
Student	^ ..<u>it works</u>	
Lecturer	Right yeah	
Student	but if you **put it in a box** and <u>count it</u> <u>it doesn't do anything</u>. Hm hm (nodding)	Hands come together

The student appeared to pick up on this metaphor and repeated it back to her, making use of the gestural metaphor that had been used by the lecturer, though, interestingly, not the verbal one (figure 15).

Figure 15. *The student: Use of gestural metaphor only.*

| Student 10.33 | like er .. you know .. sometimes we say you know the **rich people become rich** because they have the money as their res- resources? .. they can use it to .. er .. to invest in a lot of () and earn money <u>back</u> from that but .. some people they are not that rich and **keep on working** **and they don't use this money** to .. for investments so they don't get more money <u>back</u> | Both hands palms open rotating gesture

Hands still rotating come much closer together |

Like the lecturer, his hands go from being far apart to being close together, which appears to reflect the contrast between keeping the money in circulation and putting it away in the form of investments (or, as the lecturer said, 'in a box'). In the following exchange the student echoed both the verbal and the gestural metaphors that had been used by the lecturer. Here, both the lecturer and the student moved their hands away from their bodies to emphasise the concept of 'letting go' (figure 16):

Figure 16. *The student echoing verbal and gestural metaphors.*

Lecturer 17:19	and for me it was so frightening to **let go** .. of control.	Arms move forwards away from the body, palms facing upwards and slightly inwards, and bent.
Student 17:23	I think .. if you **let go** of the control a little bit by little bit gradually I think .. you won't worry that much but if you do it **suddenly** just like .. you really keep control of them from you know up until fifteen you will worry much more.	Arms move forwards away from the body, palms facing upwards and slightly inwards, and bent. Hands spread out palms facing each other

In the following exchange, in line with the information packaging hypothesis, the student appeared to use gestures to help him construe and convey the concepts 'company', 'organization', 'centralized' and 'trust'. At first sight, there appears to be a clear repetition of the sequence of the two gestures in this exchange. The student began by making made a downward-facing claw, which was followed by a gesture in which both hands were open with his palms facing upwards. He then went on to immediately repeat this sequence, almost exactly (figure 17). This could be a case of simple repetition of a gesture sequence to provide some sort of coherence (see above). On the other hand, one could relate the gestures metaphorically to the words that he is producing at the time. A 'company' is arguably more of a specific, tightly-defined entity than an 'organization',

a fact which appears to be reflected in the tight and loose gestures that he used. In the second gesture sequence, the downward-facing claw could arguably be related to the process of things being 'centralized' and controlled whereas the open hands appear to relate metaphorically to openness and 'trust'. Given that both language and gesture are capable of serving more than one function at once, it is possible that both interpretations are correct. The repetition of sound patterns has been identified as a key feature of spoken discourse (Tannen 1987), and the sound patterns occur in words that make sense in the overall context of the discourse. Here we appear to be observing the same phenomenon, but the repetition involves gesture rather than sound patterns. The polysemous nature of gestures appears to have been exploited both to add meaning to the discourse and to increase its internal coherence.

Figure 17. *Gestures relate metaphorically to words*.

Student 19.10	I think in a **company** or in the **organization** …em … (that you and the boss) need to be (open wider) so so not being so .. em ^ centralized .. also em .. people who work for them have to say you can **trust me**	RH downward-facing claw Both hands open palms facing upwards RH downward-facing claw Both hands open palms facing upwards

In this exchange the lecturer made two clear attempts to obtain some background knowledge about the student that she could then use in her explanations. She began by asking him what his career plans were, to which he replied that he would be returning to his teaching job in Taiwan. After she had explained the competing values framework to him, she asked him if he was a Christian, having noticed that he had adopted an English name with strong Biblical connections. Having ascertained that that he had Christian beliefs the lecturer went on to use a parable to explain the model (figure 18):

Figure 18. *The lecturer: Obtaining background knowledge.*

Lecturer 11.59	right well there is one of the things that Jesus said which was ^ .. it was a story about .. em .. a rich man .. gave his servants .. money .. and er .. one of them .. ^ invested the money and (brought the) .. and one of them kept .. and one of them ^ .. put it in a hole in the ground and did nothing with it and was just .. so .. so .. attitudes to money attitudes to risk .. attitudes to openness .. very very different ..	Hands together Gestures far away to the right Points downwards with RH
Student	yeah yeah it's interesting.	

The student appeared to know this parable and nodded throughout as if to indicate comprehension. It appeared to serve a dual function: explanation and relationship-building. When asked about her use of this parable, the lecturer commented that it was very deliberate. She made a particular point of finding out about her students' religious backgrounds early on in her teaching, and using relevant stories from those religions in class. She described these techniques as 'hooks' that could be used to speak to students on their own terms, and claimed to have a wide variety of such 'hooks' up her sleeve, and to use as many as possible. She aimed to use a hook as soon as possible in any teaching encounter, particularly when teaching international students. As she came from a religious background herself, she believed that religious hooks made particularly good use of the common ground between her and her students.

Other gestures used by the student appeared to relate to underlying conceptual metaphors. For example, in the following gesture cluster, when he was talking about his school, he gestured behind as if to indicate the past or perhaps 'back in Taiwan'. The box shape appeared to help him think. The relationship was accompanied by a dynamic backwards and forwards gesture, which indicate the give and take of relationships and this was reduced to two fingers when he talked specifically about the teachers (figure 19).

Figure 19. *The student: Gestures underlying conceptual metaphor.*

Student 8.00	But for most of the time I think **for our school** Because he really .. tried <u>his best to</u>**^** .. I think he manage to <u>keep</u> a good **relationship** within the school that everyone can do their best and because .. good **relationship between teachers** ..	RH palm bent facing backwards waving backwards towards the speaker Forms box shape Hands in front of chest, open fingers, moving backwards and forwards Fore-fingers pointing backwards and forwards

Like the previous student, this student also appeared to use particular gestures to help him recall abstract nouns in English. The pulling gesture suggests that he perceived a somewhat dynamic nature to the type of freedom that he was talking about. He physically pointed to his head when talking about what he felt or believed (figure 20).

Figure 20. *The student: Metonymic gesture.*

Student 18.05	I'm just thinking coz .. em … I think I was the kind of child who was .. kept .. er kept with .. **not that much freedom** maybe it is but .. jus- **I feel like that** yeah <u>in</u> my mind.	Pulls hands apart, palms bent facing each other Points fingers on RH towards head

This gesture is interesting from a cross-cultural perspective. It has been pointed out (Yu 1995) that, while both the *heart* and the *head* can be seen as containers for feelings, thoughts, or other aspects of the self in Chinese, English does not place as much emphasis on the *heart*. A similar argument is advanced by Pritzker (2007) who argues that while Chinese regards the *heart* to be the seat of thought and emotion and the *brain* only plays the secondary role of cognition, English tends to regard the *brain* as the cognitive centre of the self. One might therefore expect the gestures used by Chinese speakers to represent cognition to centre more on the heart than on the head. In our data however, the student only ever pointed to his head when talking about how he felt.

He also used the same pulling apart gesture when talking about a 'process', which added a degree of coherence to the exchange that was not necessarily present in the verbal code (figure 21). This linked the notion of 'process' to the aforementioned 'freedom'.

Figure 21. *The student: Gestural coherence*.

Student 19.06	and .. but .. **I think** .. one important thing during **this process** to <u>let them go</u> to <u>have</u> this freedom … but there's still something that I'm not so sure if I wanted to try. yeah coz I think … maybe this will .. not <u>make</u> my parents happy^.	RH forms a claw Hands pulling apart RH moves behind right ear

The final gesture that the student used in this exchange was also metaphorical. When talking about his parents, he moved his right hand to a place behind his right ear. This mirrored the gesture that he had used when talking about his school. Again, the gesture is apparently saying 'back in Taiwan' or maybe 'back in my past'. It's unclear which meaning was intended, probably both, but the coherence of the discourse is again enhanced by his repetition of this gesture.

7. CONCLUSION

It is clear from the above discussion that metaphor played an important role in both of these exchanges. We have also seen that the gestures tended to enhance the metaphoricity of the verbal code and that they sometimes added metaphoricity that was not obviously present in the language. They served a largely pedagogical function, and the lecturer was aware of this some of the time. The almost exact reproduction of some of the gestures by the students in their own explanations points to the salience they appear to have had for them in the interaction, facilitating comprehension and recall of the content. Both students appeared to appropriate metaphorical gestures but the one from outside the discourse community did so more immediately. Both students appeared to use gesture to help them 'package' their ideas into words and phrases in line with the information packaging hypothesis and this often involved metaphor. The repetition of polysemous gestures contributed to the overall coherence of the discourse. In both settings the lecturer used what appeared to be 'deliberate' metaphors both in language (i.e. the 'hooks') and in gesture (i.e. the 'business').

More research could usefully be conducted in order to establish the extent to which the patterns of metaphor and gesture use were idiosyncratic to these particular interlocutors, or whether they represent more general phenomena. It would also be interesting to look at the use of verbal and gestural metaphor by a lecturer who is less used to speaking to international students in order to establish whether there are examples of good practice in this particular data set, which other lecturers could perhaps learn from.

NOTES

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