THE ROLE OF BODY MOVES IN DIALOGUE*

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1. Introduction

The importance of non-verbal communication within the human interface, the point at which interaction occurs, is becoming of increasing significance for natural language pragmatics and the design of interactive systems based upon it. This dimension of communication is essential for an understanding of 'co-presence' (Good, 1996), which is an essential component of human understanding. Co-presence denotes simply how we are present to each other, be this in the same physical space or in differing physical spaces. Being present may be described as a precondition for communication, and the nature of this precondition has a bearing upon how we coordinate with each other.

A focus on the body, specifically 'body moves', in this paper is an attempt at expanding into the area which has been called 'pragmatic acts' (Mey 1993, 2000) and thereby widen the 'narrow conception of strict natural language pragmatics'. Body moves create what we term 'contact', i.e. a space of engagement between persons, and they can move in a rhythm of bodily take-turn. These categories do not exist in a pragmatics which is too limited to capture this aspect of communication, and thus of understanding. Yet, these categories, we propose, are salient aspects of co-presence, and thus of understanding.

Work on gestures (Streeck 1993, McNeill *et al.* 1994) shows that gesture and speech are co-ordinated activities, suggesting a dialectic in cognition, and that this relationship is essential for effective communication. The body moves study presented here indicates the construction/establishment of mutual ground within a space of action.

Body moves are investigated as a special case of information flow in dialogue. By 'body move' we do not refer to the physical movement itself; rather, we target the act that the movement performs. In this sense, body moves are considered as a dimension of the information environment of face-to-face communication. Body language is to be considered both as a form of expression and as

communication dynamics. In this paper, the empirical work from a preliminary study (of landscape architects) will be presented.

The analysis draws on the concept of meta-communication (Allwood *et al.* 1991, Shimojima *et al.* 1997). Meta-communication conveys information about the communication at the meta-level, as opposed to being about the topic situation of the conversation itself, at the base-level, i.e. of content. The conveyance of information at the meta-level can be triggered by a number of facts holding in a conversation, and acting as cues conveying a variety of information about the conversation situation (Shimojima *et al.* 1997). These cues consist of filler and responses, functioning as discourse markers, the particular nature of which can be identified by prosody and 'phoricity' (Kawamori *et al.* 1998). Such interjections in speech determine discourse structures and the nature of the co-ordination taking place (Schiffrin 1987, Kawamori *et al.* 1998).

In the work described here, the idea of 'body language' is being developed, specifically in the sense of body movements occurring in response to each other, whether related to a verbal utterance or independent of it. Such moves are distinguished from representational or iconic gestures of the verbal utterance, which serve primarily to illustrate it. Where in conversation, a 'move' is described as a verbal action which causes the conversation to move forward (Carletta *et al.* 1997), the body move, developed in this paper, is a bodily action, a 'dialogue act', which initiates or responds to a bodily action or verbal utterance, and thus is wider in its scope (see further section 2.2).

In this paper, the work focuses on body moves conveying information about the conversation situation. Being extralinguistic factors, body moves comes under the category of *cueing facts*; as they are also about conversation organisation, they represent *cued information* (Shimojima 1997). It is from this perspective that body moves constitute a kind of information flow.

2. Theories of Communicative Acts

Before presenting our categorisation of body moves, we will look at some theories of communicative acts (CA), from which we will draw similarities to the body moves we have identified. We will look specifically at Allwood et al.'s theory of Linguistic (inter-individual)

Feedback (1991), Traum's Theory of Grounding (1994), and Carletta *et al.*'s (1997) categories of conversational moves. These provide a description of an empirical framework for considering the phenomena of bodily interactions, in terms of what we will call Dialogue Act Theory, for the case of body moves. In presenting the body moves below, we provide empirical testimony for the fact that such acts exist for interactive body movements, which is a condition for building a theoretical framework. We propose that body moves work in harmony with the intention of the speech act. We attempt to categorise some of the elementary body moves that we assume are co-related to communicative acts.

2.1

Allwood's theory (1991) of 'Linguistic (interindividual) Feedback' provides a means of understanding and describing linguistic mechanisms whereby participants in conversation exchange information about four basic communicative functions that are essential for human, direct face-to-face communication. In the theory, special attention is paid to the type of reaction conveyed by feedback utterances, the communicative status of the information conveyed (i.e. the level of awareness and intentionality of the communicating sender), and the context sensitivity of feedback utterances. With regard to context sensitivity, Allwood et al. focus on the type of speech act (mood), the factual polarity, and the information status of the earlier utterance influencing the interpretation of feedback utterances. The four basic communicative functions are:

1) *Contact* – whether the interlocutor is willing and able to continue the interaction
2) *Perception* – whether the interlocutor is willing and able to perceive the message
3) *Understanding* – whether the interlocutor is willing and able to understand the message
4) *Attitudinal reactions* – whether the interlocutor is willing and able to react and (adequately) respond to the message, specifically whether he/she accepts or rejects it.

According to Allwood *et al.*, these four basic functions arise from four basic requirements of human communication:

a) the willingness and ability to communicate;
b) the fact that the receiver (listener) is willing and able to perceive the behavioural or other means whereby the sender (speaker) is displaying or signalling information;
c) whether the receiver is willing and able to understand the content that the sender is displaying or signalling. It is also helpful if the receiver can perceive and understand various types of indicated information;
d) the receiver's willingness and ability to react attitudinally and behaviourally to various aspects of the content that the sender is displaying or signalling. It also helps if the receiver can react to indicated information.

Some conventional features of displayed or signalled content seem important for the interpretation of the content of feedback expressions. Among these features are polarity (positive or negative) and mood (conventionally signalled evocative intention).

The importance of linguistic feedback lies in the need to elicit and give information about the basic communicative functions, i.e. providing continued contact, perception, understanding, and emotional/attitudinal reaction, and doing this in a sufficiently unobtrusive way to allow communication to serve as an instrument for pursuing various human activities. Linguistic feedback is therefore an essential instrument for successful communication and for the incrementality of communication, i.e. the step by step build-up of consensual, joint understanding, which in its turn is a means for pursuing a variety of other human activities.

2.2

In his theory of 'Grounding' (1994), Traum identifies categories of speech acts, grounding acts and turn taking. Grounding is about the act of building common ground. Conversants need to bring a certain amount of common ground to a conversation. The process of bringing in and adding to this common ground has been called grounding (Clark and Schaefer 1989). With regard to communi-cative acts and their application to interactive body movements (gestures), key features of communicative acts can be described as *core speech acts* and *turn-taking acts*, whilst the key features of body moves are *grounding acts* and *turn-taking acts*.

To account for the mutual understanding of core speech acts, Traum proposes the idea of a discourse unit (DU). This consists of an initial presentation and as many subsequent utterances as are needed to make the act mutually understood, or grounded. The initial presentation is a core speech act termed 'attempt'; it is fully realised when the DU is grounded. A minimal DU contains an initial presentation and an acknowledgement, and may also include any repairs or continuations needed to realise the act. Some of these speech acts are: inform, check, request, accept and suggest.

A grounding act takes place at the level of an utterance unit (UU), which is defined as continuous speech by the same speaker, punctuated by prosodic boundaries. Each UU corresponds to one grounding act for each DU it is part of. An utterance unit may also contain one or more turn-taking acts. Turn-taking acts are *keep-turn*, *release-turn* and *take-turn*; there may be several such acts in a single utterance. The start of an utterance may be a take-turn act and the ending of it might involve a release-turn or a keep-turn, to be followed by another utterance. Any instance of starting to talk can be seen as a take-turn; it succeeds when no one else talks at the same time. It may be that someone has the turn when take-turn is attempted, and if the other party stops speaking, the attempt has been successful. Any instance of continuing to talk can be seen as keeping the turn. Release-turn actions are usually signalled by intonation.

In summary, a DU represents a unit of conversation at which grounding takes place; at the same time, it is composed of individual utterance-level actions. The opening utterance of a DU is called an initiate act; subsequent utterances are called continue acts.

2.2.1. Grounding acts

1. *'Initiate'* is the initial utterance component of a DU. It normally corresponds to the first utterance in the presentation phase. 'Initiate' is distinguished from 'continue' largely by context.

2. *'Continue'* is the continuation of a previous act performed by the same speaker. It is expressed in a separate utterance unit, but is syntactically and semantically part of the original act.

2.2.2. Turn-taking acts

1. A *'keep-turn'* may be any instance of continuing to talk. An extreme case of a 'keep-turn' is a 'floor battle', where one tries to keep the turn while another tries to take it.
2. A *'release-turn'* is usually signalled by intonation.
3. A *'take-turn'* succeeds when no-one else speaks; however if someone is speaking, the attempt has been successful if they stop. Within each turn, a take-turn action occurs at the beginning of the first utterance.

2.3

Carletta *et al.* (1997) present a theory of communicative acts termed 'Conversational Moves', which are different kinds of initiations and responses classified according to their purposes. (They are also described as 'forward' and 'backward' looking functions; Allen and Core 1997). Carletta *et al.*'s scheme is an extension of the moves making up Houghton's (1986) interaction frames to fit the kinds of interactions that they identified in their study of dialogues occurring in so-called 'map tasks'. The two categories we draw upon are *check* and *acknowledge*.

2.3.1. Conversation moves

1. *'Check'* requests a partner to confirm information that the speaker has some reason to believe is true, but is not entirely sure about. Typically, the information to be confirmed is something the partner has tried to convey explicitly, or something the speaker believes was meant to be inferred from what the partner has said. Check moves are invariably about some information that the speaker has been given.

Example:

G: Ehm, curve slightly to your right.
F: <u>To my right?</u>
G: Yes.
F: <u>As I look at it?</u>

2.3.2

'Acknowledge' is a verbal response that minimally shows that the speaker has heard the move to which he/she responds; often it also demonstrates that the move was understood and accepted. Carletta *et al.* refer to Clark and Schaefer's (1989) five kinds of evidence that an utterance has been accepted: 'continued attention', 'initiating a relevant utterance', 'verbally acknowledging the utterance', 'demonstrating an understanding of the utterance by paraphrasing it', and 'repeating part or all of the utterance verbatim'. Carletta *et al.* count only the last three as acknowledge moves, as the first response leaves no trace in a dialogue transcript to be coded, and the second involves further dialogue moves.

Example:

G: Ehm, if you . . . you're heading southwards.
F: <u>Mmhmm</u>.

Example :

G: Do you have a stone circle at the bottom?
F: No.
G: <u>No, you don't</u>.

As we will see below, the first of Clark and Schaefer's evidence for acceptance, 'continued attention', is useful for the case of body moves, which will be the topic of the next section.

3. Body Moves: An Empirical Framework

3.1. Introduction

Body Moves (BM) are meta-communicative, spontaneous bodily interactions which communicate information about the communication situation (as opposed to communicating information about the topic situation of the communication). Hence, in the BM, focus is not upon representational or iconic movements; in using the term 'Body Move' we refer to the 'act' performed, rather than to the specific physical movement of the body. BMs are rather like moves in a game; however, unlike moves in a game, which are of a strategic nature, BMs do not embody specific intentions. While in speech, the communicative acts we have cited above are strategic in that they embody some intention, and this intention is expected to be understood by the listener in the context of the communication situation, we cannot say there is an intention in the body move itself. We could, though, say that they embody an intention of communication as such.

The body moves were defined and identified through a cyclical process, which began with the identification of various acts in body interactions which seemed to mimic acts which occur in speech. We found that in the process of defining and clarifying the nature of these moves, we could not apply the same definitions as for speech. In addition, we identified a number of acts which do not exist in speech, or have not yet been considered as relevant to the speech situation. In order to provide a definition for such a body move, we drew upon aspects of the communicative act theories that were cited above. Hence it is not possible to say that the body moves were developed either by a derivative or an inductive method; rather the process involved both.

3.2. The Space of Engagement

Body moves take place within shifting spaces of engagement. An *engagement space* may be defined as the aggregate of the participants' body fields of engagement. An engagement field is based on a certain commitment in being bodily together. Hence we can call the engagement space, the *body field of engagement*. In defining this

space, we found it most useful to draw upon Allwood's theory of communicative acts, as laid out above.

The body field of engagement is set as the communication opens and the bodies indicate and signal a willingness to co-operate. The body field of engagement is a variable field and changes, depending on participants being comfortable or uncomfortable with each other. For instance, in the case where one person moves their hand over into the other's space, and that person withdraws their hand, this indicates that the 'contact' between these persons is disrupted. There are also examples where the participants hold their bodies back from entering the other's field of engagement, indicating disagreement or discrepancy in the communication, signalling distance rather than contact. The degree of contact and the nature of the distance are expressed in terms of commitment and attitude. Hence an *immediate* space of engagement involves a high degree of contact and commitment to the communication situation; a *passive distance* is less involved and committed, whereas *disagreement* is very distanced and commitment is withheld. Disagreement or discrepancy can necessitate a *reconfiguration* of the body field of engagement.

Reconfiguration occurs when there is a disturbance in the relationship between the speakers; this discrepancy between them is expressed by the bodies' need to re-arrange their relationship to each other, so that a feeling of sharing an engagement space is re-established. After a momentary detachment or distance, the response move is akin to a motor reaction. It is a rythmic reconfiguration of the body space between the participants creating a new engagement situation by reshaping the field of engagement.

The action category of reconfiguration occurs because there is a problem in the overlap in one body's field of engagement with the other body's, whenever another person moves into the first person's field, at any particular moment. But if the overlap of their respective fields poses no problem, the participants can undertake parallel, co-ordinated moves.

Within the space of engagement, bodies can move in a coordinated manner to shift the *focus* within the communication situation to a specific point. Focus involves a movement of the body towards the area the speaker is attending to, i.e. his/her *space of bodily attention*; in response, the listener or other party moves their body towards the same focus. Inasmuch as body moves control the

management of focus, they become significant as a dimension of body interaction.

3. 3. Body Moves and Composite Dialogue Acts

Body moves occur within the arena of the engagement space. In developing the categories of BMs below, we have found it helpful to draw upon communicative acts and features of these acts which are parallel to the phenomena observed. Some features of communicative acts are specific to speech and are not embodied in BMs, such as intonation, or asking questions and giving commands. Some BMs have required the development of new terms, either in order to distinguish between them and their conversation analytic counterpart, such as in the case of 'check' (here, a body move is called a *b-check*); or because there appears to be no clear counterpart in the theory of communicative acts (CA), for instance *dem-ref, attempt-contact* and *focus*. (All these categories are explained below).

Further, the BM may be described as a Composite Dialogue Act (CDA) (see Engel 1998, on 'composite signal'). A CDA can take one of four forms: a BM is accompanied by a CA; a BM is accompanied by no speech; a CA is accompanied by no BM; there is only silence, e.g. as in a pause. In the cases where a BM has an accompanying CA, the nature of the CA is dependent upon the context of the BM. In the examples which we present below, the particular set of CA for any BM is not exhaustive of the set of possible CDAs. The associated CAs covered here are: suggest, confirm, acknowledgement, and information-reference. *Suggest* (Traum 1994) happens when the initiator proposes a new item as part of a plan; *confirm* is when either the initiator elicits confirmation and/or the responder confirms they understand; *acknowledgement (ack)* (Carletta 1997) shows that the speaker has heard the move to which it responds, and often demonstrates understanding and acceptance; the newly constructed CA *information-reference (info-ref)* applies to CDA, and denotes the content of the speech for which the BM provides the evidence. The following BMs have been identified and will be discussed briefly below.

3.3.1. Attempt-Contact

This BM draws the other person's attention to the situation. The movement can be used to involve other persons in the dialogue, i.e. increasing their participation in, or commitment to, the dialogue situation, without explicitly asking them. *Attempt-Contact* increases the degree of contact in the engagement space by getting the other to move into the speaker's bodily field of engagement. This BM can be enabled with either an eye movement, i.e. a looking gesture, or a hand and arm gesture. The associated CA is a *confirm* or a *suggest* action.

3.3.2. Demonstrative Reference (Dem-Ref)

This is a gesture that physically demonstrates the matter being referred to in the communication. It points to a specific location. It is possible to directly demonstrate, or ostensively assign referent to, a noun phrase by a pointing action. This BM facilitates the communication of the speech content such as the speech alone cannot achieve, and in doing so, adds a communicative dimension which is different from that of the speech. In comparison to the body moves of Attempt-Contact and Focus (see section 3.3.6), *Dem-Ref* lies inside the communicative content. The associated CA is a *suggest* action.

3.3.3. Take-turn, Keep-turn, Release-turn

The BM *Take-Turn* occurs when the body moves prior to the speech turn (cf. Traum's theory of turn-taking acts, mentioned in section 2.2). Whether bodily actions can be considered in terms of turn-taking is a grey area. Some researchers suggest it is possible; thus Bavelas (1994) considers taking the turn to be an interactive gesture. According to Traum, the start of an utterance may be a take-turn act, whereas ending it might involve a *Release-Turn* or a *Keep-Turn*, to be followed with another utterance when take-turn is attempted. We term this case an 'interruption movement' (see the example below). Release-turn is a type of take-turn which occurs when somebody having the turn withdraws. In response to this act, the recipients

release their turn by moving out of the space they were acting in. In the case of an interruption, the take-turn and release-turn can signal disagreement, as when one person withdraws from the interference of the other's body field into their own. The associated CA for a take-turn could be any. In the example below it is a *suggest* act.

3.3.4. Body-Check (B-Check)

This body move is identifiable as a 'check' in a manner that is parallel to the CA 'check', but in a physical way, hence it needs another expression. As we wish to retain the idea of a checking action, we have chosen to call it the Body-Check, or *B-Check*. In addition to confirming information, this body move signals understanding. We have drawn upon the idea of the CA 'check' in our identification of this move; but while the BM's associated CA is a request for confirming the information which is about the content of the communication, BMs are metacommunicative: they cannot be questions or requests or commands, which are about the content level. B-check may be considered as a special case of confirmation, and it often accompanies confirmation-related speech acts (including 'check', but not necessarily 'request'), and it is much wider in its scope than the CA 'check'. In the examples of 'check' moves below, the participants' dialogue acts and body moves, respectively, mimic each other; however, this may be coincidental.

3.3.5. Acknowledge (Ack)

The *Acknowledge* move gives an idea of the respondent's attitude of response, i.e. how the person hears, and understands and perceives, what is being discussed. It shows continued attention. This aspect of Acknowledge was identified by Clark and Schaefer (1989); it was not included by Carletta *et al.* (1997), because it leaves no trace in a dialogue transcript to be coded. However, it is a part of the BM. The hearer and listener demonstrate, with their gesture, how they are acknowledging the other's proposal or request for agreement. The BM occurs in response to the other's CA of information reference or suggestion, and may be accompanied by a body release-turn or bodily place-holder. Its associated CA is the speech act 'acknowledge' or

'accept'. In one of the examples shown below, the magnitude of the gesture and the physical proximity of the one person's hands moving in close to the other's indicates the degree of engagement in the situation. The movement creates a change in the *degree* of contact, which may indicate the nature of the acknowledgement or acceptance.

3.3.6. Focus

Focus is a meta-discursive function of the type: 'I'm going to focus on this spot'. It is a signal for a change of level, causing a shift in the discussion towards the meta-level, and involving a movement of the body towards the area the speaker is attending to (the focus); in response, it causes the listener or other party to move their body forward towards the same focus. The category becomes significant as a dimension of body interaction as it shows how focus is managed. The response move may not involve understanding, but it does involve a willingness to perceive the message (Allwood *et al.* 1991). Maybe it is possible to describe Focus as mediating recognition on the part of the recipient, as the body move involving Focus causes the other persons to give their attention to what the focusing person is going to do next, by making them move into that person's space of bodily attention. It is distinct from *Dem-Ref*, as the latter refers back to the noun-phrase and is ostensive, whereas *Focus* is about what the mover is going to shift towards, and thus creates increased *Contact* for engagement in this shift. The associated CA to the BM is a *suggest* act.

The BM categories can be described primarily as being of two kinds: *Dem-Ref, Attempt-Contact* and *Focus* are primarily acts which refer directly to the real world; in contrast, *Check* and *Ack* refer primarily to the dialogue, the conversation. The process of grounding, i.e. the development of mutual belief, is taking place in the space within these dimensions, both by means of turn taking, which is dialogue centred, and by means of referencing and contact, which are body and real-world centred.

4. The Study

An exploratory video analysis of various tasks being undertaken by landscape architects at different stages of design reveals a dialogue of body movements. Such gestures, movements of the whole body (for example, from one side of the table to another), and interactions with pens and paper and other materials, are seen to constitute part of an overall dialogue and move it forward.

The selected video excerpt analysed is of the landscape architects working on a particular design task in the daily practice of their firm. Of the two landscape architects involved, one is fully qualified and director of the company, whilst the other is being trained and due to qualify in a year's time. They are both familiar with each other and share a mutual respect and empathetic relationship, despite the difference in their status and experience. Their task is to produce a plan for a car park next to a new office building, as well as for the site itself. Some time earlier, they had produced a sketch plan for a client, who wants the site to be transformed from being an old derelict brewery to a company headquarters. The client has produced a revised sketch plan, largely following their ideas, and wants them to take this further. Part of the discussion between A (senior) and B (junior) is whether to go for something radical, or generally remain within the bounds of what they have in front of them. They decide (or rather, A decides) that changing it would not greatly improve on what they have. Hence they decide upon the latter option.

There is a great deal of body interactions in this design activity. The interactants' mutual respect allows B to express disagreements and produce his own suggestions. However, the discrepancy in status is evident in the take-turns and keep-turns that A performs. Below, we present some examples of moves. It is expected that a framework will have elements which are orthogonal in their relationships. The descriptions are only of physical movements. They belong to what has been called 'dynamic cueing' (Shimojima *et al.* 1997).

4.0. Transcription Coding Scheme

In the examples presented below, we will use the following conventions to encode the Body Moves (BM) and Communicative Acts (CA).

{}	body movements with speech
[]	body movements as turns (i.e. no speech)
|	indicates the point at which body actions start
(())	pause
// //	comment
=	overlap
()	difficult to make out the speech
(1,2,3)	tag reference to specific moment of BM in the figures (1), (2), (3)

The two architects are working around a table and their movements take place in the space of its surface and perimeter. A is on the right of the table and B is on the left, in all the examples below.
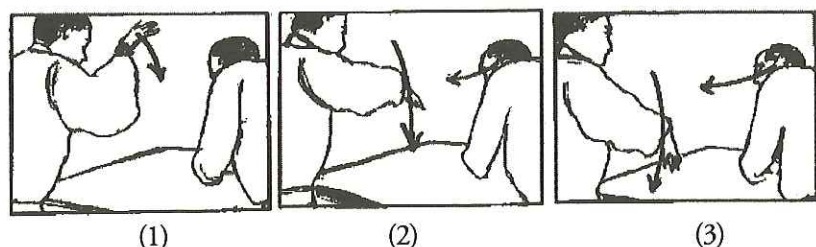
4.1. Attempt-Contact

Attempt-Contact is a movement that causes an increased involvement and commitment in the dialogue situation. It is enabled by either an eye movement, i.e. some looking gesture, or a hand and arm gesture. The body action causes the other's body to attend and thereby increase the degree of contact. The associated CA is *confirm* or *suggest*.

In the first example, B uses his hands and arms to get A's attention, and in the second example, A uses his eyes, looking at B at a particular moment, to both note his attention but also to draw him into a greater condition of engagement.

4.1.1. Example 1

B is getting A's bodily attention. The gesture, in content terms, is iconic. However, it is also a *move*. Prior to this, B had been drawing in the same space as A, but moves back when he learns, to his disappointment, that he has missed a meeting where someone had presented some information about a part of the site that he had wanted to 'follow up'. A is still talking to B and giving him information, but B is not physically attending to him. B has just heard that a big pit is being excavated beneath this spot, and he is asking about whether the water is able to get through. The discussion

is about planting trees and making sure they have sufficient aeration. It is in this context that B makes this body move.

(1)   (2)   (3)

B   Yeh ((pause)) | and it allows water to get through   **B: *CA:confirm***
{B gestures up and down with his hand and
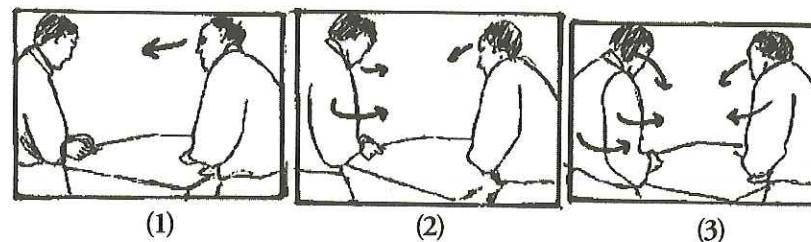A looks up}   **B: BM:attempt-contact (1-3)**
A   Get through that's right   **A: *CA:confirm***

Here, the request act performed by the BM is different in level and nature from that performed by the CA *info-request*, (though related to it). The verbal act is a request for confirmation of information content. Although in this case, *Attempt-Contact* involves a representational gesture, or convention, the BM is also a request for attention. In fact, it is almost a demand for attention in its exaggerated sweep. It is very hard for A to ignore it physically. Prior to this move, B had withdrawn from the immediate space of engagement and was participating from a physically passive distance; however his subsequent BM causes A to move into his field of engagement, making A turn his head around and answer his need. Hence the BM increases the degree of contact between the two.

4.1.2. Example 2

The discussion here is about designing the carpark spaces. A has just made a proposal for a rough layout. He has made a topic shift; prior to the shift, their bodies were a bit apart. However, A actually wants to work on the practical matter and it is in this context that he is drawing B in.

(1)   (2)   (3)

A   . . . . I mean the geometry will tell us
whether we can get parking bay five
and six and two bays of five each, if between   **A: *CA:Suggest***
   {looks at B}   **A: BM:attempt-contact(1-3)**
there and there we can't actually get
{B turns body closer towards A and table}   (2-3)

In this example, speech and body perform different acts, but the BM acts to sustain and support the success of the CA. As a result of this act, B moves his body closer to A and the table, and focuses upon the central point of A's speech. In other words, B enters A's body field of attention.

4.2. Take-turn

The BM *Take-turn* occurs when the body moves prior to the speech turn. In the example below, the take-turn takes the form of an interruption. The recipients of the turn release their turn by moving out of the space they were acting in. The associated CA in the example below is *suggest*.

In this example, B has been making a suggestion about using trees to create a signed path in the paving (1). The discussion is at a conceptual design level. However, in interrupting him (1-2), A shifts the discussion to the practical level of how people would move through the space to get to their offices.

(1)   (2)   (3)
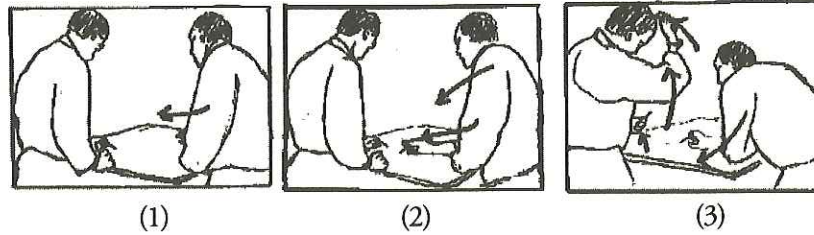
B	You could start the trim from the corner couldn't	
	you. If you had trees something	
	in your paving something in the paving	
	that cuts	B: *CA:Suggest*
A	[A moves his hand in]	A: *BM:Take-turn(1-2)*
	Blut looking at it from a very practical point	A: *CA:Suggest*
	{A's elbows go down on the table, B moves back}	
	of view if people getting if you get out of the car here	
	how do you get to the office, . . .	

This move also acts as an interruption, signalling disagreement. The body move takes place before the utterance begins, hence the move is categorised as a *Take-turn*. The body move also shifts the *Focus* to a micro-level one. Maybe the body move Take-turn can be described as a signal for the orientation of the dimension to a specific focus.

4.3. Body-Check

This BM has been identified as a check move, as it parallels the CA 'check' in a physical way. It may be considered as a special case of confirmation. The associated CA is a request for confirming the information, *suggest*.

In the example below, A has moved over across the table space towards B, and is suggesting a place for planting some trees as a pattern in the paving, as a design idea. With pen in hand he moves over the focus area and it lights onto the paper. B's pen hovers around the spot, initially lighting in one place (1) and then moving on to the correct spot (2).

(1)   (2)
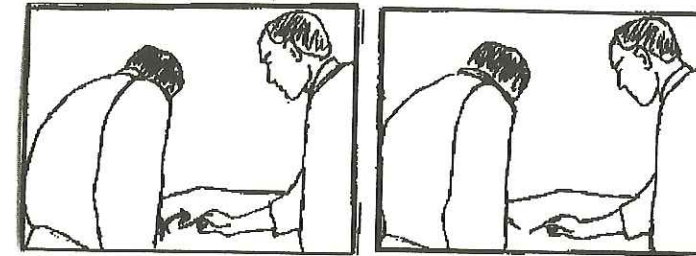
A	Get through that's right. Um but we'd obviously	
	need to put them in quite big sizes and pull something	
	//A - back to sweeping across paper with pencil in hand//	
	through. I'd quite like to ( ) through I here=	A: *CA:Suggest*
	{A's pen lightly points down at the spot}	A: *BM:Dem-Ref(1)*
B	{leans over and checks the place with his pencil}	B: *BM:B-Check(1-2)*
	= through here yeh	B: *CA:Confirm*

The Check move takes place in response to a proposal and signals perception and understanding. Unlike the acknowledge move, below, it does not indicate an attitudinal reaction (as in Allwood et al. 1991), i.e. acceptance, disagreement or rejection, etc. The BM *B-Check* is in response to the demonstrative referencing (*Dem-Ref*) by A. B's CA confirms what A is saying by repeating his utterance, whilst his BM is also similar to that of A's.

4.4. Acknowledge

With this BM, the hearer or listener demonstrate how they are acknowledging the other person's proposal or request for agreement. The associated CA is acknowledge or accept.

4.4.1. Example 1

A is talking about how people would enter the site by car and then how they would walk towards their offices. The architects want to create a design which has signposts, such as trees in the examples

above, which shape a route through the site. A has his pen placed upon the area of focus (1) and then lifts it up (2), at which point B moves his finger in.


(1)   (2)   (3)
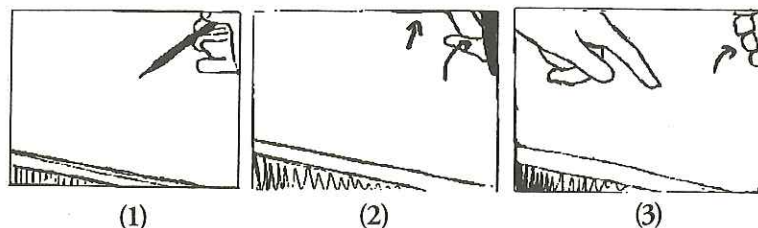
A   Ok. Well if you're coming from here, park your
     car there, go through to Oh, you'll probably go
     to that building or you'll walk through here I. It's   A: *CA:Info-Ref* (1-2)
          {B marks the spot with his finger}   B: BM:Ack(3)
     not really very satisfactory is it. But I don't want=
B   =No   B: *CA:Ack*
A   us just to do something different

B's BM acknowledges A's CA information reference (*info-ref*), but this is not accompanied by any speech on B's part. A's subsequent utterance in reaction to B's gesture shows that he reads B's finger movement as a 'negative' evaluation, i.e. as indicating disagreement. However, as a response to the prior utterance, it signals understanding of what A is referring to and affirms this. Just as the speech act *ack* signals 'continued attention', the body move *Ack* is a necessary dimension, being part of *Contact*. This move, like that of *Check*, is in response to a body move, iconic gesture and spoken discourse.

4.4.2. Example 2

A is talking about the main office towards which people will be walking. The design, so far, has not considered how people are going to reach there from the various parts of the car park. Again, the conversation is about signing the route to guide people through the spaces.

(1)   (2)   (3)
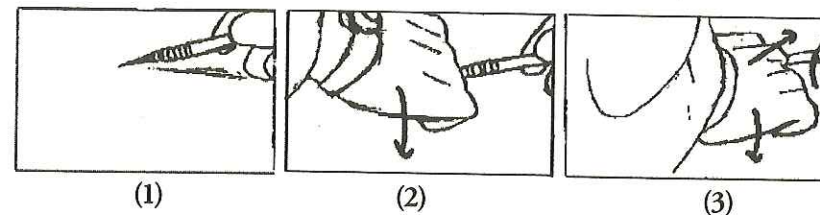
A   . . Well it seems we've ignored the main   A: *CA: Suggest(1)*
     {A keeps pen pointed on the same spot}   (1)
     access of the brew house
B   Yes   B: *CA:Ack*
A   Haven't we   A: *CA:Confirm*(1)
B   Totally. Yeh. Cos isn't it fronted by this   B: *CA:Accept*
     {B moves hands in very close to A's pointed pen}   B: BM:Ack(2-3)

B demonstrates his acknowledgement of the situation by moving both hands very close into the space that A has been holding attention upon. B's movement parallels his emphatic 'Totally'. In moving in so close (emphasis), B demonstrates to A that he is engaging in the situation. The contact is very strong as B's hands come right up to A's, who has to move his pencil back slightly, but keeps his hand in the same position.

4.5. Focus

This BM mediates recognition on the part of the recipients, because it causes them to give their attention to what the other person is going to do next by making them move into that person's space of bodily attention, and by this shift creates increased *Contact* for engagement. The associated CA to the BM is *suggest*.

    In this example, A is talking about how people would leave their cars and walk over to their offices. This discussion is about the best way of entering the office site though the carpark. There need to be signs showing how to exit the car park and enter the site.

(1)   (2)   (3)
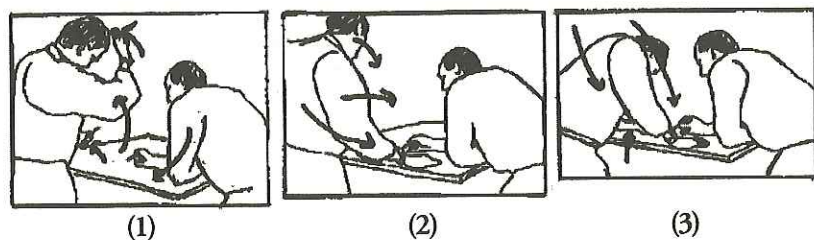
A   if people getting if you get out of the car here how do   A: *CA:Suggest*
     {A keeps elbows on the table}   A: BM:Focus(1-2)
     you get to the office |
                      {B bends down}   B: BM:Focus(2-3)

This sequence follows on from the take-turn example. There, A had moved his body down onto the table and B had moved his body out of the drawing space (1). However, B subsequently moves down into the same space as A's body movement *Focus* engages B in his space of attention (2-3).

5. Conclusion

In this paper we have presented some basic concepts for categorising body moves as meta-communicative interactive moves. The categories *Attempt-Contact, Dem-Ref, Focus, Acknowledge,* and *B-Check* provide us with a preliminary empirical framework for describing the non-verbal dimension of co-ordination processes in direct face-to-face interaction.

The application of the notion of 'dialogue act' to the phenomena of interactive body movement has shown us that the body is able to convey information at a different level of communication than its co-related speech activity. Body moves affect the way in which people are present to each other; they influence people's degree of closeness and their commitment to engage in action, and physically demonstrate this. This dimension of the way participants in a conversation relate to each other is not carried in the speech, but affects its import, as seen, for instance, in the case of *Dem-Ref*. This move enables the respondent to physically check and thereby understand, and demonstrate the understanding of, the speaker's utterance. It would not be possible for the speaker to exactly describe the point of reference simply by talking, whereas the reference can be identified immediately when pointed at, i.e. when physically referred to.

In drawing upon Allwood's theory of linguistic feedback (in particular, the concept of contact), we have developed the concept of the 'engagement space' between bodies interacting with each other. Traum's theory of grounding allows body moves to be seen as part of the process of achieving mutual understanding through turn-taking and grounding acts. In drawing upon these theories, the dimension of contact becomes part of the grounding process. Body moves provide us with a dimension to the grounding process that is additional to the one covered by communicative act theory, and as such, can broaden the linguistic focus to encompass a wider concept of communicative or pragmatic acts. The Composite Dialogue Act (CDA) is our bid towards this.

The idea of an engagement space or composite body field of interaction allows the spatial dimension of physical coordinative activity to become part of a dialogue act, specifically, a CDA. Possible CDAs take place within this space. It is a variable space, as bodies are constantly negotiating and reforming their fields and their degrees of commitment to the situation. Moves such as Attempt-Contact and Focus enable the physical management of any possible loss of contact and lack of engagement or attention. In this way, these CDAs maintain the coordination process; similar tasks are assigned to the other CDAs, as we have shown in the preceding.

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Note

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