The direction giving pointing gestures of the Malay Malaysian speech community

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When we speak, we do not only produce a chain of words and utterances, but we also perform various body movements that convey information. These movements are usually made with the hands and are what McNeill (1992) terms gestures. Although gesturing is universal, the way we gesture and the meanings we associate with gestures vary cross-culturally. Using a qualitative approach, this paper describes and illustrates the forms and functions of pointing gestures used by Malay speakers. The data discussed is based on 10 video recorded direction-giving interactions. Findings show that pointing among Malay speakers is achieved through the use of various manual pointing gestures and other bodily actions involving gaze, torso and head movements, which communicate distinct functions. This study has indicated that although some gesture forms and functions are shared among Malay speakers and other cultural groups, some direction-giving pointing behaviors are Malay specific.

Keywords: direction giving, pointing gestures, non-verbal behavior, Malay

Introduction

People of diverse cultural backgrounds do not only perceive of the world differently but also communicate differently as cultural values affect not only their thoughts and behaviors, but also the way they speak and gesture. Von Raffler-Engler (1980, p. 136) notes that “beyond a very early state, there is no motion in the body which is not influenced by culture” (as cited in Schneller, 1992, p. 217). Gestures are in fact a feature and a property of every culture and speech community. Speakers of different cultural backgrounds formulate norms of gesture use within their own cultures typically regarding the forms, range, rate and expanse of gestures (Gullberg, 2006). Several studies have shown how gestures can change shape, size and meaning or function across cultural communities and different contexts of
use (e.g., Kendon, 1992, 2004; Morris, Collett, Marsh, & O’Shaugnessey, 1979; Orie, 2009; Wilkins, 2003).

Among the major reasons cross-cultural differences prevail in gesture patterns is a difference in the form-meaning associations (Kita, 2009). Different cultures assign different meanings to particular gesture forms. As such gestures are conventionalized and their meanings remain opaque and often incomprehensible to members of other cultures. Pointing gestures are a group of gestures, which are also governed by culture specific conventions as different cultures associate certain forms of pointing with contrastive meanings (Kita, 2003, 2009). Several studies have shown how variation in forms of pointing can correspond with identifiable variation in semiotic functions (e.g., Enfield, 2001; Kendon & Versante, 2003; Kendon, 2004, Chapter 11; Orie, 2009; Wilkins, 2003). In Naples, for instance, pointing with an index finger palm down brings the referent into focus while using an index finger with a palm vertical orientation designates a referent that is relevant to the current discourse but not it’s primary focus (Kendon & Versante, 2003). In comparison, pointing using the lips has been documented in Laos in Southeast Asia to serve the same function as the index finger palm down variant described in Kendon and Versante’s (2003) study. According to Enfield (2001) lip pointing among the Laos is observed in use when the referent or object is the focal element of the speaker’s discourse or when the gesturer assumes that the addressee is likely to know what the referent is.

More importantly, pointing gestures differ cross-culturally due to diversity in gestural pragmatics, which is reflected in issues such as gestural politeness. Just as it is possible to be rude to a person through speech, it is also possible to be disrespectful through the gestures one uses (Kita, 2009). Pointing gestures for example are subject to culturally determined norms which condition who or what a person can point at as well as which body part can be used for pointing (e.g., index finger, open hand, thumb, mouth, head, nose, chin etc.) and whether the right or left hand can be used. For instance, although lip pointing is attested among the Yoruba in Nigeria, it is considered inappropriate to point with if one is pointing to a person who is older or higher in social status than the one doing the pointing (Orie, 2009). In a similar vein, the use of the index finger in pointing is described as being an impolite form of pointing among Malays who prefer the use of a hand shape in which the thumb is laid on top of fully retracted fingers and directed toward what is being pointed at (the “forward thumb” hand shape, as we later refer to it) (e.g., Abdullah & Pedersen, 2003; Harris, Moran, & Moran, 2004).

Differences in norms of gesturing among speakers of different cultures whether due to variation in the form-function association or gestural politeness may result in misunderstandings in communication. Nonetheless, despite the importance of studying cultural differences in communication, research examining the gestural
behavior of speakers of different cultures is scarce. A brief review of literature on research examining pointing behavior indicates that pointing gestures have only been examined among a limited number of cultures and languages thus far. These include Guugu Yimithirr (Haviland, 1993, 1996) and Arrernte (Wilkins, 2003) in Australia, Ghanaian (Kita & Essegbey, 2001), Yoruba (Agwuele, 2014; Orie, 2009), Japanese (Kita, 2003), Lao (Enfield, 2001; Enfield, Kita, & Ruiter, 2007), and Neapolitans in Italy (Kendon & Versante, 2003) as well as the English in the British Midlands (Kendon, 2004). Within the relatively little existing research that allows us to examine cultural differences in pointing gesture production and comprehension, little can be found on the pointing gestural behavior of the Malay Malaysian speech community. To our knowledge, this is the first study, which systematically examines the pointing behavior of Malay speakers.

This paper describes and illustrates some of the pointing gestures of the Malay speech community when giving route or wayfinding directions. In the present study, we take McNeill’s (1992) category of deictic gestures (i.e., pointing gestures) as the starting point of our investigation. Pointing is mainly realized with the hands, but may also be achieved by certain movements of the eyes, elbows, feet or lips (Kendon & Versante, 2003). The present study treats pointing as gestures “indicating an object, a location or a direction, which is discovered by projecting a straight line from the furthest point of the body part that has been extended outward into the space that extends beyond the speaker” (Kendon, 2004, p. 200). Kendon (2004, p. 200) further adds that this object or location maybe something that is visible to all participants or it may be an object or a location that exists somewhere in the real word but cannot be seen. Additional movements of the head, body or gaze may also accompany pointing gestures used in giving route directions. Specifically, this study aims to identify the variety of different forms and functions of hand pointing gestures as well as bodily actions used in route direction giving interactions of Malay speakers.

Before determining the various forms and functions of deictic gestures and associated bodily actions used by Malay speakers in giving directions, it is essential to provide some background information on the Malay speech community. Malaysia is both a multilingual and multiethnic country consisting of people from different backgrounds (Ismail & Lawrence, 2012). Malays make up 50.4% of the population while 23.7% are Chinese, 11% indigenous peoples, 7.1% Indians, and 7.8% non-Malaysians (Noor & Chan-Hoong, 2013). Differences among the various ethnic groups in communication have been attested in a number of studies (e.g., Gill, 2014; Omar, 1992). These differences arise due to differences in cultural values, language, religion and way of life (David, Ching-Hei & Mohd Don, 2002). The data discussed in the present study examines only the Malay speech community.
Method

The data

Data for this study comes from a total of 10 naturalistic direction giving interactions. For the purpose of this study, pedestrians inside the University of Malaya campus were stopped by the researcher and the researcher’s collaborator and asked for route directions to a residential college within the university. To capture the pointing gestures, the conversations were video-recorded using a professional DSL camera (Canon 700D) from a distance of five meters. Additionally, the verbal components of the interaction were audio-recorded using a mobile phone recorder, which was visible and held by the direction requester during the interactions. The audio recordings were made to supplement the video-recordings, ensure a better sound quality and keep back-up data. It is important to note that the direction givers (DG’s) were not aware that the interactions were being recorded and were only informed about the audio and video recordings after the interactions had taken place. To ensure alignment of speech and gestures, after recording all data, the video and audio recordings were synchronized manually using a video editing software known as ScreenFlow 5.0.

Participants

The participants of this study included 10 Malay direction givers and 2 direction requesters (the researcher and the researcher’s collaborator). To ensure that the conversational contexts were as equivalent as possible, it was important to control as many variables as possible. Hence, the interactions were between participants of the same gender, educated, whom were strangers and between the ages of 18 to 35. To determine the direction givers’ characteristics, we used a background questionnaire after the interactions had taken place and the participants were debriefed about the purpose of the study.

Data collection procedures

The data collection process commenced in July 2014 and continued until September 2014. Pedestrians were approached by the researcher or the researcher’s collaborator inside the University of Malaya campus and asked for directions to a residential college known as College 12. The starting point of the route description was the entrance of the University of Malaya’s main library. Figure 1 displays the route chosen for the study. As English is a language commonly spoken among Malaysians, all route direction-giving interactions in the present research
were conducted entirely in English. While the two direction requesters (DR) were aware that the interactions were being recorded, the direction givers (DG) were not informed about the recordings until the interactions took place.

Ensuring that ethical issues are taken seriously is a major component in any research. Therefore, following the route direction giving interactions, the informants were debriefed about the purpose of the study and permission to use the video and audio recordings was obtained. The participants’ consent was not obtained beforehand as this may have affected both their gestures and speech. After gaining the participants consent to use the data, participants were then asked to complete the background questionnaires.

Figure 1. A map of the route described in the interactions

Plan of data analysis

The first step after collecting the data was to transcribe all direction giving interactions. For the purpose of this study, the researcher used a combination of Jefferson’s (2004) transcription notations to capture the verbal components of the interaction and McNeill’s (1992) transcription conventions to transcribe the gestures used. Only gestures used for pointing and bodily actions, which occurred in association with these gestures, were identified and transcribed.
After the transcription phase was completed, the data was then analyzed qualitatively. To do so, we first viewed all videos in slow motion and identified all pointing gestures used in giving route directions. The focus was mainly on identifying the forms and functions of manual pointing gestures used. However, as manual pointing gestures are often combined with other bodily actions in giving route directions, we also identified the associated non-manual movements.

With regards to form, first the various manual pointing gesture forms were distinguished based on two parameters. These were the shape and orientation of the hand. This method has previously been employed by Kendon (2004) and Kendon and Versante (2003) in determining forms of gestures. Additionally, to identify the forms of non-manual bodily actions, which were employed in conjunction with hand pointing, we attempted to describe the direction of the movement of the non-manual action towards the referent or location pointed at. Pointing gestures and non-manual movements, which were similar in form, were then grouped and assigned a coding name. Figure 2 illustrates the different gesture forms identified in the data of the present study.

Second, in determining the functions of manual gestures and bodily movements deployed in direction giving, we used the “context of use approach” employed by Kendon (2004) and Kendon and Versante (2003). To do so, we examined when the various forms of pointing gestures and their associated bodily movements occurred and what functions they conveyed in giving directions.

To ensure reliability of coding, the pointing gesture forms and their associated non-manual movements were also coded independently by a second coder. Besides discussions on what the study was about, the second coder was instructed on what parameters to use to code the manual pointing gestures. With regards to non-manual actions, the independent coder was asked to describe the movement observed. Only 25% of the gestures identified in the data were coded by the independent coder. Inter-rater reliability was calculated in terms of percentage of agreement and reached a percentage of 83.87%. Differences in coding the forms were then resolved through discussions between the two coders.

**Findings and discussion**

The analysis of data in the present study indicates that Malay direction givers use a variety of different forms of manual pointing gestures in giving route directions. In addition to the various hand pointing gestures, there are also a variety of non-manual actions, which occurred in coordination with hand pointing and played a significant role in the pointing action. These involve movements of the gaze, torso
and head. There are also several other studies that show that pointing is not limited to the use of hands but may also involve other parts of the body (e.g., Calbris, 1990; Enfield, 2001; Kita, 2003; Mondada, 2014; Orie, 2009; Wilkins, 2003).

In the following subsections the various forms of manual pointing gestures identified in the data are first described then linked to the function(s) they conveyed on the basis of the discourse context with which these gestures occurred.
Following this a description of the various forms and functions of other non-manual actions used in conjunction with hand pointing gestures is provided. Examples are discussed with figures and/or excerpts from the discourse dialogues. When more than one pointing gesture is used with an utterance, the gesture discussed is underlined for the purpose of distinction.

Hand pointing

With respect to pointing with the hand, several different forms were observed in the data. While all of these forms functioned in pointing out the referent, each form appears to be associated with a different function. This finding lends support to previous gestural studies, which have also drawn attention to the fact that deciding to choose one form of pointing over another in a given context is not arbitrary and can make a difference in the meaning and function of the pointing action (e.g., Calbris, 1990; Kendon & Versante, 2003; Kendon, 2004; Kita, 2009; Orie, 2009). Hand pointing in the data includes the use of three main forms: a) index finger pointing, b) open hand pointing and c) two forms of thumb pointing.

Index finger pointing

Index finger pointing is realized by Malay direction givers in a number of ways depending on the manner in which the hand is positioned and the forearm is rotated. However, all forms are common in the use of an extended index finger. Two main variants of index finger pointing are identified in the route direction giving interactions of Malay direction givers.

The first variant represents the typical form of index finger pointing and is realized by extending the index finger forward while the palm is facing downwards. The forearm in this situation is also held in a prone position. Index finger palm down pointing may be realized in two ways: either by retracting the remaining fingers tightly into the palm as shown in Figure 3 or by retracting the other fingers loosely into the palm as presented in Figure 4.

In general, variation in the forms of index finger pointing displayed in Figures 3 and 4 above appears to bare no significance in terms of use. In fact both forms of index finger palm down pointing are used by Malay direction givers to distinguish and individuate referents (i.e., landmarks and objects such as buildings, roads, bus stops, fields and taxi stands) and locations in direction giving interactions whether these referents are visible or non-visible in the interlocutor’s immediate environment. In pointing to referents using one of the two variants of index finger palm down pointing, the direction giver attempts to distinguish the precise location of the referent pointed and individuate it from other possible
referents. Consequently, index finger palm down variants mainly occur in association with utterances in which demonstrative as well as locative pronouns such as ‘this’, ‘that’, ‘here’ ‘there’ were employed. Example (1) illustrates the function of the index finger palm down gesture with fingers tightly retracted into the palm in individuating a particular road.
In Example (1), the referent “this road” is the primary focus of the discourse. To individualize this particular road from other possible roads present in the immediate environment in front of the interlocutors, the speaker extends her arm fully, with an index finger palm down gesture when uttering the phrase “this road”. In this example, the use of the pointing gesture supports the verbal utterance by indicating the point to which the recipient’s attention is to be directed.

Interestingly, when the referent individuated is visible and within close proximity from the position of the direction giver or non-visible in the space in front of the interlocutors, it is common for the direction giver to extend the forefinger downwards to point to the ground (Figure 5).

Figure 5. Index finger palm down realized with the extension of the index finger to point to the ground
The forearm in this situation is not fully extended as when pointing to a referent, which is fairly distant from the speaker. This mainly occurs in examples in which locative phrases such as “from here” or “here” were used at the beginning of the direction giving interaction. It also occurs along side demonstrative phrases such as “That is X” when individuating a particular landmark, which is not visible to the interlocutors (Example 2). Distinguishing between distant and close referents using the extension of the arm has also been observed by Wilkins (2003) and Orie (2009).

(2) DG: and then you: – you can er – you will find a: DTC (0.2) that one (. ah Tunku Chancellor [and you go straight:::] and you:- (0.2) [you turn left] (1) and you can find a big building [ah twelve college] ((smiles and nods)) (2) [follow this road] (3) 
(4) (1) RH open palm vertical is moved from the speaker’s right to her left and across her body. 
(2) RH open palm vertical is retracted and moved to the left of the speaker. 
(3) The head is moved swiftly forward. The chin is bought closer to the speaker’s body and then back up in the form of a directionalized head nod. Simultaneously, the RH index finger palm down is pointed to the ground. The index finger is extended fully to point towards the ground. The arm is held close to the speaker’s body. 
(4) Looks at the visible road leading to college 12 once more. The torso is rotated slightly to the left in the direction of the visible road leading to college 12. RH index palm down is pointed to the left of the speaker in the direction of the visible road leading to college 12. The arm is raised and fully extended.

The index finger palm down variants in the present study share the same function of referent individuating which Kendon and Versante (2003) described for Neapolitan speakers and which Kendon (2004, Chapter 11) described for British English speakers. Wilkins (2003) also observed this for speakers of Arrernte in Australia and Orie (2009) has described the same thing for Yoruba speakers.

Pointing using an index finger with the palm held in a vertical manner is the third variant of index finger pointing observed among Malay direction givers (Figure 6). This form entails extending the index finger while retracting all remaining fingers tightly into the palm. The forearm here is held in a neutral position.
In pointing with an index finger palm vertical gesture, Malay direction givers also sought to indicate referents such as landmarks and objects. However, pointing using this form differs from index palm down variants in that the referent is not pointed at to be distinguished from other possible referents. Instead, the focus is mainly on an activity related to the referent, the relationship of the referent with an additional object or on a comment made about the referent. Likewise, in the Neapolitan data examined by Kendon and Versante (2003), it was also observed that speakers used an index finger palm vertical gesture when an object was being distinguished from another object it had some relationship with, if a comment was being made on the referent indicated or if the object was a condition or cause of something else. Example (3) serves to illustrate the use of the index finger palm vertical gesture in the data of the present study. In this example, the speaker points to the taxi stand when uttering the word “taxi”. Here, the speaker does not seek to individuate a particular taxi in the immediate environment in front of the interlocutors but rather the focus is on an activity to which the referent is related, which in this case is the activity of waiting by the taxi stand.

(3) DG: = college 12 = [I think you can go there by taxi you have to wait]

(1) The speaker directs her gaze towards the taxi stand, and then raises her RH index palm vertical directly in front of her gesture space to point at the taxi stand opposite where she is standing. The arm is not fully stretched in this situation.

In pointing to a referent using an index finger palm vertical gesture, the referent pointed at may be present in front of the interlocutors (Example (3)), to their side or behind them as portrayed in Example (4). In Example (4), the speaker uses the
index finger palm vertical when uttering the word “bus”. At the same time, she extends her left hand laterally to the left to point at the bus stop. Again, we notice that the speaker does not seek to single out the bus pointed at but to indicate its relation to the action of taking a bus.

(4) 1. DR: = can you tell me how I can get to college 12?
2. DG: [> to college 12 < (. ) you can- you can ride the bus there: (. ) you can
   wait for the bus ] er: bus called B

(1) Directs gaze in the direction of the visible bus stop opposite where the
interlocutors are standing. LH index palm vertical is pointed laterally
to the speaker’s left where the bus stop is located.

From the account above, we have noted that an extension of the forearm in pointing to referents using an index finger pointing variant can indicate that the object or location pointed at is further away as opposed to a forearm, which is held close to the speaker’s body. We have also seen how a change in the orientation of the palm and rotation of the forearm from an index finger palm down to an index finger palm vertical gesture can yield a difference in the function the index finger pointing gesture communicates. This distinction in the function the two forms of index finger pointing communicate confirms what has previously been established by Kendon and Versante (2003) in Napoli. The use of various variants of the index finger pointing gesture has also previously been noted by Wilkins (2003). Interestingly, however unlike the present study and that of Kendon and Versante (2003), Wilkins (2003) observed that among the Arrernte a total of five variants of index finger pointing were used to carry out a single function of identifying a single object or landmark.

**Open hand pointing**

Open hand pointing forms used by Malay direction givers refer to forms in which the whole hand is used in pointing out a referent. In realizing open hand pointing, direction givers differ in the degree of tension at which the hand and fingers are held. While in some forms the hand is held firmly, in other forms the hand and fingers are held loosely. Four distinct variants of open hand pointing are observed in the direction giving interactions of Malay speakers. These are open hand palm vertical, open hand palm oblique, open hand palm away and open hand palm down.

The first of these forms is the open hand palm vertical form in which all fingers are extended while the palm is held vertically. In achieving this gesture form, the arm maybe fully extended or relaxed (Figure 7). The forearm here is held in a neutral position.
The direction giving pointing gestures of the Malay Malaysian speech community

Figure 7. Open hand palm vertical

The analysis of utterances accompanying the open hand palm vertical gesture indicate that it is principally used by Malay speakers to denote straight paths and linear movements in route direction giving. Example (5) displays the use of this gesture in indicating a straight path.

(5) DG: [just follow this road] and then you will see: (0.2) a junction
(1) RH open hand palm vertical is raised slightly upwards directly in front of the speaker’s gesture space to indicate moving forward in a straight path. The arm is fully extended.

In addition to indicating straight paths, the open hand palm vertical gesture is also employed in identifying cardinal directions such as right and left turns along the route. This is displayed clearly in Example (6) in which the direction giver directs the traveller to take a right turn and points to the right using the an open hand palm vertical. We notice here that initially the direction giver makes a verbal mistake by instructing the traveller to “turn left” while the correct turn in this situation is a right turn. Nonetheless, the pointing gesture used is still directed towards the correct direction.

(6) DG: and you :- you [turn left] [a: a: and you turn right ⇑]
(1) RH open hand palm vertical is fully extended and raised up in front of the speaker’s gesture space. Then slightly moved to the right.
(2) RH open hand palm vertical is fully extended and raised up in front of the speaker’s gesture space. The hand and arm are moved quickly to indicate the correction made in speech.
Remarkably, it was also noted that in some examples the verbal utterance used in giving the route directions was not sufficient in determining which turn the listener was to take. In such contexts the pointing gesture serves to specify which turn the direction requester is to take. Without the use of the pointing gesture in such examples the utterance would be incomprehensible. This is demonstrated clearly in Example (7). In this example, it is only through the pointing gesture that the listener understands that he is required to take a left turn rather than a right turn. Consequently, the pointing gestures not only support the verbal strategy but also add additional information, which is not present in the verbal speech.

(7) DG: [ ah: you go er that side =]

(1) LH open hand palm vertical is moved laterally to the left of the speaker.

The open hand palm vertical gesture identified in the present study appears to be reminiscent of the “Flat Hand Pointing Gesture” noted by Wilkins (2003) and Orie (2009) and which is commonly employed in projecting lines and straight paths as well as identifying cardinal directions and sub paths. Kendon and Versante (2003) and Kendon (2004) also identified a comparable form which they term as the “Open Hand Palm Vertical” gesture in both Neapolitan and English data respectively. Unlike the present study and previous research on pointing (i.e., Orie, 2009; Wilkins, 2003), Kendon and Versante (2003) and Kendon (2004) observed that this gesture was used in indicating referents when a quality was attributed to the referent or it was referred to as a cause or source of something. This divergence in the functions the same gesture form conveys in different studies can be attributed to the type of talk or discourse analyzed. Whereas both Kendon and Versante (2003) and Kendon (2004) examined pointing behavior in social events (council meetings and open market service encounters) the present study explores pointing in route direction giving interactions.

The second of the four variants of open hand pointing identified among Malay direction givers is the open hand palm oblique gesture. In realizing this form, the palm is held in an oblique orientation while the forearm is held in a neutral position, which is more or less supine (Figure 8). The wrist may be extended further away from the body as the arrow indicates in Figure 8.
Figure 8. Open hand palm oblique

Primarily, this gesture form is used to specify the position of the referent or location pointed at relative to the person travelling the route or to another object or landmark along the route. Consequently, it commonly occurs with verbal utterances consisting of relational terms such as “on your right”, “on your left”, “next to”, “opposite”. In Example (8) for instance, we notice the direction giver uses the open hand palm oblique to indicate the position of the college relative to the position of the traveller taking the route.

(8) DG: [until at your right er kk 12]

(1) RH open palm oblique is laterally pointed to the speaker’s right.

In its function of indicating the position of the referent relative to the traveller, the open hand palm oblique gesture shares the function of indicating the relationship between the referent and the interlocutor that Kendon and Versante (2003) also observed in their study of pointing in Napoli. However, in the present study, this relationship is spatial in nature. Kendon and Versante (2003) further note that the open palm oblique gesture carried out an additional function of pointing to referents when a negative comment was made about the referent. Here again we notice that the type of conversations and discourse examined influence the function the same gesture conveys in different research.

Moreover, whereas Orie (2009) indicates that the open hand palm oblique gesture is employed among the Yoruba to point politely either at an elderly person or an individual in a socially superior position, the present study did not take into consideration the impact of variables such as age and social class in pointing, which most probably would have influenced the results. Differences in the results of the present study and previous research on functions of pointing gestures may
possibly be due to the context and situation in which the research is conducted as well as the relationship between the interlocutors.

Additionally, Malay speakers were also observed to use a third variant of open hand pointing, which is achieved by raising an open hand from a forearm that is in a prone position. In realizing this gesture form, the palm is held in a vertical manner away from the speaker while the fingers are spread apart (Figure 9). The wrist maybe extended forward or held close to the speaker’s body.

![Image of open hand palm away gesture]

**Figure 9.** Open hand palm away

Analysis of utterances accompanying the open hand palm away gesture as Kendon (2004) terms this form indicate that it is mainly used to designate landmarks, which are not visible in the direction giver’s immediate environment. The function of pointing at a referent using this gesture is to indicate the mass of the referent pointed at rather than to individuate it from other possible referents. This is demonstrated in Example (9) in which the direction giver uses an open hand palm away gesture to indicate the final landmark in the route described. The word “block” in this example refers to the destination the direction requester is seeking directions to. By using the open hand palm away gesture in indicating the block, the direction giver does not appear to individuate it from other possible referents but to indicate its presence in the location described.

(9) DG: ((nods twice)) [and then you will see: the block] [the building itself]

(1) RH open hand palm away, fingers wide apart is placed directly in the middle of the speaker’s gesture space, while the palm is moved in a waving motion.

(2) RH extended thumb pointing, fingers are clenched into the palm while the
index finger is extended to the back of the speaker to point at the building behind the speaker. The hand is placed above the speaker’s right shoulder.

Besides indicating landmarks which are not visible in the immediate environment in front of the interlocutors, the open hand palm away gesture is also used when a certain characteristic is being attributed to a referent or a comment on the qualities of a referent are given. This function of the open hand palm away gesture is highlighted clearly in Example (10). In this example, the direction giver points using the open hand palm away gesture twice. First, to denote a non-visible landmark, which is present at the end of the route when the direction giver utters the phrase “there will be one block”. Second, he repeats the same gesture to attribute the quality “new” to the referent pointed at when uttering the phrase “will be new blocks”.

(10) DG: [there will be::: (0.2) one block ] [will be new blocks ]

(1) LH open palm vertical is held in front of the speaker’s gesture space and tapped forward.
(2) The LH open palm vertical is held in the same position but tapped further forward.

The form and function of the open hand palm away gesture presents a point of overlap with the observation Kendon (2004) made in the use of the same gesture form among speakers in Northamptonshire. Kendon (2004) also noted the use of the open hand palm away gesture in pointing when referring to objects or referents in virtue of their aspect of spatial extent. However, an additional function noted by Kendon (2004), which was not attested in the present study, is the use of this form of pointing in referring to multiple referents considered as an ensemble.

A parallel form known as “Wide Hand Extension” has also been identified by Orie (2009). According to Orie (2009) two variants of this form are used in pointing among the Yoruba. The first of these variants is achieved with the hand held on a prone forearm while the second involves pointing with the hand positioned downwards (Figure 10, A and B). In contrast to the functions the open hand palm away gesture conveyed in the present study, Orie (2009) found that this form was mainly employed as a plural equivalent of index finger pointing. This function further confirms Kendon’s (2004) observation but does not reflect the use of the open hand palm away gesture in the present research.
The final form of open hand pointing identified among Malay direction givers is the open hand palm down gesture. To achieve this form, the open hand is positioned parallel to the ground while the fingers are either held tightly or wide apart (Figure 11). This gesture is the same form Orie (2009) describes as a variant of the wide hand extension pointing (Figure 10, B). In the present study we regard this form of pointing as a separate pointing gestures rather than a variant of the wide hand extension since the two forms are distinct in terms of the functions they convey.

When used in pointing the open hand palm down gesture mainly indicates straight paths and linear movements in route direction giving interactions (Example 11). Consequently, it is commonly associated with lexical items denoting straight movements (e.g., straight, keep further, all the way).
(11) DG: yea [you have to go: strai::ght] [and then towards the end] there is

(1) a:(.) turn about

(2) LH open palm down, fingers are held next to one another while the arm is fully extended and raised up in front of the speaker’s gesture space.

(2) LH index palm down (fingers clutched into the palm). Arm is fully extended in front of the speaker’s gesture space to point to the end of the road.

In some instances the pointing feature of the open hand palm down gesture was also combined with other functions. For instance, it is possible to combine with the pointing function an iconic or metaphoric feature in which the movement or shape of the referent pointed at is described. Pointing gestures, which incorporate other gesture functions, have also been noted by Kendon (2004) among Neapolitans. Figure 12 illustrates the use of an open hand palm down gesture, which is combined, with a descriptive function of an action (i.e., an iconic function). Example (12) presents the verbal utterance accompanying the open hand palm down pointing gesture in Figure 12. We notice from this example that the direction giver not only points to indicate that the recipient should take a straight path but also moves his index and middle finger in a manner which represents a walking motion.

Figure 12. Open hand palm down pointing combined with a movement indicating a walking motion

(12) DG: yea and then [just walk straight::t] until you reach a: two junction =

(1) LH open palm down is extended fully in front of the speaker’s gesture space to indicate a straight movement. The index and middle finger are moved back and forth to represent a walking motion.
Interestingly, although comparable forms of this gesture have been attested by Orie (2009) and Wilkins (2003), its function in indicating straight paths has not been noted before. This may be due to the lack of comparable research on pointing gestures used in direction giving.

**Thumb pointing**

Moving on to thumb pointing, the data analyzed yielded two forms of thumb pointing used by Malay speakers. The first form involves retracting all fingers into the palm while extending the thumb to the back of the speaker (Figure 13). Utterances, which accompany the extended thumb pointing form, indicate that it is used when the referent pointed at is located behind the speaker.

![Figure 13. Extended thumb pointing](image)

In Example (13), the direction giver raises her extended thumb over her right shoulder to point at the building behind her when uttering the phrase “the building itself”. The building pointed at is not only pointed at using the extended thumb form due to its location behind the speaker but because it is not a referent to be individuated in this context. Instead, the speaker points using this gesture to exemplify what the block at the end of the route looks like.

(13) M2: ((nods twice)) [and then you will see: the block] [the building itself]

(1) RH open hand palm away, fingers wide apart is placed directly in the middle of the speaker's gesture space, while the palm is moved in a waving motion.

(2) RH extended thumb pointing, fingers are clenched into the palm while the
index finger is extended to the back of the speaker to point at the building behind the speaker. The RH hand is placed above the speaker’s right shoulder.

Extended thumb pointing used to indicate referents behind or to the side of the speaker has also been reported among speakers of English (Kendon, 2004), French (Calbris, 1990), Neapolitan (Kendon & Versante, 2003), Spanish (Saitz & Cervenka, 1973), and Yoruba (Orie, 2009).

A second thumb based pointing gesture used by Malay direction givers is realized by clenching all the fingers into the palm while the thumb is placed on top of the index finger rather than being extended to the back (Figure 14).

![Figure 14. Forward thumb pointing](image)

An examination of the utterances, which accompany this form of pointing, reveal that forward thumb pointing (as we shall call it here) serves the same referential functions as index finger pointing among Malay speakers. Example (14) indicates that forward thumb pointing like index finger pointing variants is also used to single out landmarks, places and objects.

(14) **DG**: if I want- [If you want to walk (.) you have to:: (.) a:: take this road =]

(1) Rotates his body and directs his gaze in the direction of the opposite visible road leading to college 12. Then, points using a RH forward thumb-pointing gesture. All fingers are clutched in to the palm while the thumb is rested on the index finger. The arm is extended and raised up in front of the speaker’s gesture space towards the visible road leading to college 12.
Apart from individuating referents however, forward thumb pointing has also been observed as a means of indicating straight paths and linear movements (Example 15). However, it is important to note here that index finger pointing appears to be a far more commonly used pointing gesture in individuating referents and indicating straight paths than is forward thumb pointing among Malay direction givers.

(15) DG: [then er: you go straight (.) again]

(1) RH forward thumb is placed on top of the index finger while the remaining fingers are clutched into the palm.

Surprisingly, the use of forward thumb pointing has not been noted in previous research examining the pointing gestures of speakers of other cultures and languages and appears to be a Malay specific pointing gesture. More importantly, although literature on Malaysian customs has pointed out that forward thumb pointing is the polite form of pointing in comparison to index finger pointing (Abdullah & Pedersen, 2003; Harris et al., 2004), data of the present study indicates that it is less frequently used in comparison to index finger pointing in route direction giving. This suggest that it is possible that the use of index finger pointing is not considered impolite if the referent pointed at is an object or a place rather than a person. Likewise, Orie (2009) also observed that Yoruba speakers found more liberty in using the index finger to point to non-human objects such as trees, houses and locations. Evidently, as the present study only focuses on pointing to referents, which were mainly objects, locations, directions and landmarks, further research is needed to confirm this observation.

In brief, the account above has indicated that Malay direction givers use various forms of hand pointing gestures in giving directions including variants of index finger pointing, open hand pointing as well as thumb pointing. Hitherto we have observed that various forms of pointing are associated with different functions and meanings. Additionally, we have noted that whereas some variants of hand pointing have been identified in the pointing behaviors of speakers of other languages and cultural groups, a number of forms appear to be a characteristic of the hand pointing behaviors of Malay speakers.

Other bodily actions used in coordination with manual pointing gestures

The Malay direction giving data shows that in pointing to referents, objects and directions, direction givers also used a number of non-manual movements in combination with the various forms of manual pointing gestures. Having thus determined the various forms and functions of the manual pointing gestures
employed in route direction giving interactions, we can now turn to an examination of the forms and functions of the non-manual actions employed in pointing. Non-manual actions involved in the pointing behavior of Malay direction givers in the present study include the use of gaze, torso rotation and head movements.

_Gaze movements used in coordination with manual pointing gestures_

Using the eyes or movement of the gaze is a common non-manual action employed in conjunction with hand gestures in the route direction giving interactions of Malay speakers. Generally, gaze movements used in pointing are directed towards entities that are visible in the interlocutor’s physical environment. In using the gaze to indicate a referent, the speaker moves the gaze gradually towards the referent pointed at. Interestingly, gaze movement is almost always accompanied with a simultaneous movement of the torso, which is rotated to face the referent. This mainly occurs if the gesturer’s body is not aligned to the route. Once the target is identified using the gaze and torso, speakers then proceed to using the hand pointing gesture as shown in Figure 15 (A, B, C, & D). In some instances, the gaze is then directed back towards the recipient while the hand is held in its pointing position for a while. Nevertheless, a number of occurrences observed in the data have also indicated that it is possible for the speaker to retract both the hand to its home position at the same time the gaze is directed back towards the recipient.

Generally, gaze pointing is used by Malay direction givers to establish the starting point of the route. Consequently, it is mainly used to either indicate the first visible landmark at the beginning of the route or in the final phase of the interaction in which the speaker summarizes the route described and hence is required to start by pointing out the first referent once again.

Besides its use in determining the starting point of the route, it is also employed as a means of drawing the direction requester’s attention to the referent pointed at before using the hand gesture. Example (16) indicates the use of gaze in coordination with torso orientation in drawing the direction requester’s attention towards the referent.

(16) 1. DR: excuse me (.) salam alikoum (.) can you tell me how can I get to college 12?
2. DG: = [college 12↑ em: you go round this way =]
   (1)
(1) Directs gaze towards the road leading to college 12 and rotates the body towards the same direction. RH index palm down is fully extended in front of the speaker’s gesture space to point to the visible road leading to college 12. The arm is moved in a slightly circular motion.
The use of gaze movement in conjunction with other manual gestures in pointing is not limited to Malay speakers and has also been established among the Arrernte (Wilkins, 2003), Yoruba (Orie, 2009), and Lao (Enfield, 2001). Wilkins (2003, p. 186) also notes the use of gaze in alignment with manual pointing in indicating significant new places, which are introduced for the first time. Likewise, Orie (2009) observed the use of gaze in indicating objects and places for the first time. However her study also examined the use of gaze in pointing to people in which she noted that gaze used in pointing to humans instead of objects is governed by sociocultural restrictions of age. For instance, when pointing at someone older it was rendered inappropriate to use the gaze and was hence only common among peers of the same age group. In addition to sociocultural restrictions, the use of gaze to point at people was also subject to the type of discourse used. For instance, Orie (2009) observed that gaze mainly accompanied pointing gestures in secretive and conspiratorial pointing.

![Figure 15. Gaze and torso rotation used in conjunction with hand pointing](image-url)
Coordination of torso rotation with manual pointing gesture

A second non-manual action observable in the data involved the rotation of the torso to face the referent pointed at. As hitherto discussed, this occurs in situations in which the speaker’s body is facing in an opposite direction to the route. To point at the referent in such situations, the speaker gradually rotates his/her body to face the route or referent described.

Like gaze movements, it is common for torso rotation to occur predominantly at the beginning of the interaction to establish the beginning of the route and in drawing the recipients’ attention to the referent. Torso rotation is also primarily accompanied by a shift of the gaze or some form of hand pointing gesture towards the referent. Figure 15 (A, B, C & D) above illustrates how the direction giver gradually orients his body to face the visible road leading to college 12.

Results of the present study lend support to Kita (2003) and Mondada (2014) who also point out the collaboration of torso, gaze and hand gestures in pointing. Nonetheless, unlike the present study, which examines the semantic function of such actions in direction giving, Kita (2003) examined their cognitive function in facilitating the choice between cardinal concepts such as right and left. Mondada (2014) on the other hand indicates that various patterns of sequential multimodal gestalts are used in pointing (i.e., ordered organizations of gestures). She notes that pointing can occur at different sequential positions in speech (e.g., initially, early but delayed or late). According to Mondada (2014) the use of the pointing gestures at difference sequential positions within the gestalts depends on the orientation or alignment of the recipients’ bodies with one another, attainment of joint attention and gaze between the interlocutors as well as the use of verbal resources. For instance, Mondada (2014) indicates that in using the term “look” to invite the listeners to take note of something causes the delay of the pointing gesture as opposed to the use of the term “here” to get the attention of the listeners which either co-occurs with the pointing gesture or occurs late in the sequence when joint gaze is established between the interlocutors.

Coordination of head movements with manual pointing gestures

The analysis of data also yielded evidence of the use of head movements in conjunction with manual pointing gestures. Actions involving the head in the data were performed by moving the head laterally to either side of the body (i.e., left or right) to point at the referent or forward with the chin brought closer to the speaker’s body.

Figure 16 illustrates the use of a lateral head movement in conjunction with a manual pointing gesture. Utterances, which occur alongside lateral head
movements, indicate that this form of pointing serves two main functions. First, it appears to act as a means of providing cardinal directions such as indicating left and right turns within the route. Second, examples in which lateral head pointing occurs suggest its function in adding emphasis to the direction described which is also apparent in the speech accompanying the gesture (Example (17)).

Figure 16. Lateral head movement to the left of the speaker

(17) DG: yea [you have to go: straight] [and then towards the end] there is a: (.)
          (1)                                      (2)
  turn about (. in front of the: field = [there is a field there] [you have
          (3)                                      (4)
to: (. turn left] [on your left. =]
          (5)
(1) LH open palm down, fingers are held next to one another while arm is fully extended and raised up in front of the speaker’s gesture space.
(2) LH index palm down fingers clutched into the palm is fully extended to point to the end of the road.
(3) LH index palm down (fingers clutched) arm is fully stretched in front of the speaker’s gesture space and pointed towards the visible field opposite the speaker. The speaker also directs her gaze towards the visible field opposite where she is standing.
(4) LH open palm vertical is fully extended and swiftly pointed laterally to the left of the speaker.
(5) The direction giver tilts her head to the left and turns her LH open palm oblique to the left of her body simultaneously.
In this example the direction giver tilts her head laterally to the left and simultaneously gestures using her left hand in the form of an open hand palm oblique. The use of a lateral head movement in this context provides support for the hand gesture as it also serves to indicate the position of the referent relative to the traveller taking the route. However, in addition to indicating the direction of the turn the speaker should take to arrive at the destination, it conveys emphasis, which is evident in the verbal strategy used in providing the route directions, too. As presented in Example (17), the direction giver repeats the phrase “[you have to: turn left] [on your left.]” for verbal emphasis at the same time she moves both her head laterally to the left as well as her hand.

A second form of head movement used in conjunction with manual pointing gestures in the data was the forward head chin down movement. To achieve this gesture, the direction giver’s head is bought down with the chin closer to the speaker’s body by moving the head forward in a kind of directionalized nodding of the head then back up into a neutral position. Unlike lateral head movements, which are always accompanied with a hand pointing gesture, the forward head chin down movement is either used with an accompanying manual gesture or independently. Utterances used in conjunction with the forward head chin down movement indicate its use in pointing to referents, which are not visible in the interlocutor’s immediate space. This normally occurs at the end of the direction giving interaction when indicating that the direction requester has reached the final landmark in the route. In Example (18) the direction giver uses a forward head chin down movement in conjunction with the referent “college 12” to indicate reaching the final landmark within the route.

(18) DG: [and then you just straight all the way to the left] (.) and [then you will-]

(1) you will eventually arrive at college 12 =
(2) The speaker then moves his here head in the form of a chin down straight movement then back to its neutral position.

Actions involving the head have also been observed among the Yoruba (Orie, 2009). Nonetheless, although Orie (2009) also indicated that head pointing coexisted with hand pointing, she made no reference as to its function in pointing apart from noting that it is subject to sociocultural restrictions of age and status among the Yoruba.

The fact that gesture studies, which observe the use of head movements as pointing gestures occurring alongside manual pointing gestures, are scarce suggests that head pointing is less commonly used as a non-manual action in pointing. Moreover, this also points out the need for more comparative research on the pointing behavior of speakers of other cultural backgrounds.
Conclusion

This paper has described and illustrated some of the forms and functions of manual pointing gestures used by Malay direction givers when giving route directions. The results of the gesture analysis support previous research in that various forms of hand pointing gestures are used in pointing to a location. In relation to the various forms of pointing gestures used there are also various functions, which indicate how the referent is being presented in the speech.

Also, in most cases, hand pointing gestures on Malay speakers are accompanied with a range of other actions including gaze, torso orientation and lateral as well as forward head movements. These movements have also been observed to communicate various functions in the route direction giving interaction. In addition to adding support to the hand gestures used in pointing, non-manual actions add emphasis to the deictic expressions employed; establish starting points of the route and direct recipients’ attention to the referent pointed at.

More importantly, this study has indicated that although there are parallels in the pointing behavior of Malay speakers with speakers of other cultural groups, cross-cultural differences are still evident in terms of the form-function alignments of pointing gestures and other non-manual actions hence indicating that gesturing and pointing are cultural specific. Needless to say, as research on the gestural behavior of speakers of various cultures is limited, further research is needed to confirm or refute findings of the present study.

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