

How to Say Things with Hand Gestures

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Abstract

Speech act theory has been around and undergoing revisions for more than 50 years. Theories of gestures, on the other hand, are newer, as they started to emerge about 30 years ago and have since then gained more and more attention. This paper wishes to align to this growing interest in gestures by proposing an experimental pilot study of illocutionary acts produced with the help of so-called co-speech hand gestures. This study in fact brings together the two subfields of linguistics aforementioned. The experiment consists in two face-to-face conversations, each between two people. Using [ELAN](#) and the Linguistic Annotation System for Gestures (see [Bressem et al., 2013](#)) for my analyses, I found that (1) contrary to iconic and metaphoric gestures, which are unable to produce illocutionary acts by themselves, deictic gestures have some potential for being used without any speech in the production of a well-formed utterance, (2) the words accompanying a deictic gesture are often redundant with it (and not the other way around), (3) only deictic gestures are able to realise non-assertives and (4) it seems possible for deictic gestures to both contribute to the propositional content and realise the illocutionary force.

1 Introduction

Speech act theory was first developed by Austin in *How to Do Things with Words* in 1962 and then elaborated by Searle, who also coined its name. This theory explains how an addresser can produce acts by means of uttering words.

Whenever we make an utterance, we produce a series of acts: an utterance act (uttering of words), a propositional act (referring and predicating) and an illocutionary act ([Searle, 1969](#)). Together, the utterance act and the

propositional act form the locutionary act of an utterance, which in turn forms its illocutionary act together with the illocutionary force (intention in issuing the utterance) (*ibid.*).

The literature usually recognises five main categories of illocutionary speech acts (each containing many subcategories): assertives, commissives, declaratives, directives and expressives. No two illocutionary acts have the same force. For instance, an example of directive acts that do not share the same illocutionary force is the act of requesting versus the act of ordering. This contrastive example is further discussed below.

Another act, parallel to the illocutionary act, that is discussed in the literature is the perlocutionary act, that is the act of producing a particular effect in the addressee.

The next section sketches out a brief review of what speech act theorists and other scholars interested in communication said about multimodality.

2 Background

On top of producing acts by means of uttering words, addressers can also produce illocutionary acts non-verbally, such as betting, warning and ordering, to name but a very few ([Austin, 1962](#)). Additionally, [Searle \(1969\)](#) highlights that, though linguistic communication is not restricted to words, any element needs to be intended to be taken as linguistic.

A certain communicative element (e.g. a gesture or tone of voice) can also affect the illocutionary force of an utterance. Consider the following example discussed by [Bierwisch \(1980\)](#):

- (1) John, give a dollar to the bar keeper.

This utterance can be either a polite request or a

strict order depending on the accompanying gesture(s) and/or tone of voice (Bierwisch, 1980). I believe one can indeed suspect that if, for instance, the utterer uses a palm up open hand gesture to point at the bar keeper and moves her arm with a reduced and decelerated movement, it will most probably be understood as a request. However, if she uses her fully stretched index finger with an enlarged and accelerated movement, the utterance will presumably rather be interpreted as an order. A similar example will be discussed in the analysis section.

Addressees can also use deictic gestures towards objects in order to make their addressee turn and look at them. For instance, if someone says 'that chair' with a pointing gesture, it will most likely make the addressee look at the chair. In fact, gestures can also be used to locate objects, events, places and the like (Clark, 1996). Moreover, as Clark (1996) puts it, '[s]peakers gesture with their voice, hands, arms, face, eyes, and body in order to describe, indicate, and demonstrate an indefinitely wide range of objects, events, states, and properties' (p. 256).

Wharton (2009) further underlines that both facial expressions (aka facial gestures, i.e. smiles, eyebrow flashes, frowns and so on) and hand gestures indicate the addresser's internal state by conveying their attitudes to the proposition expressed:

- (2) Lily (with a stern facial expression, in an angry tone of voice, gesturing furiously):
You're late!

In this example, the aggressiveness of Lily's gestures shows how angry she is.

Additionally, Cuffari (2012) aptly pinpoints that some gestures accompanying speech have the same functions that words can fulfil. Because speech and gesture contribute in very different ways to fulfilling their functions, 'the confluence of both phenomena makes a distinct and significant contribution to the whole speech act' (Cuffari, 2012, p. 618).

Similarly, Sperber and Wilson (1995, 2012b) point out that utterances sometimes need a higher-level explicature that can be achieved by a mixture of describing and indicating, i.e. by words and by paralinguistic cues (e.g. tone of voice, gaze, head movements, facial expressions, hand gestures,...). Take this as an exemplification:

- (3) I have been here for two hours.

'Here' indicates some restriction on the area the addresser is referring to. However, when we use a deictic word such as 'here', it is not always clear if we are talking about the specific room we are in or rather about the whole building, for instance. This can be made more salient by the use of hand gestures or gaze (Sperber & Wilson, 2012b).

Some other times, one can also communicate without using words at all. To illustrate this point, Sperber and Wilson (2012a) give the following example: Mary is angry with Peter and does not want to talk, but when Peter tries to communicate, she can (1) look angrily at him and clamp her mouth firmly shut or (2) look angrily at him, put a finger to her lips and whisper 'Shhh'. In these two alternatives (among many others), Mary uses gestures that conventionally express that one wishes one's addressee to be silent (or discreet).

On top of that, Sperber and Wilson (2015) state that facial expressions can trigger conversational implicatures and thus have an impact on the message the addressee will understand:

- (4) Passenger: What time is the next train to Oxford?
Railway official: 12.48.

With a neutral facial expression, the answerer in this example does not implicate anything. However, with a specific facial expression, she may implicate that the train is leaving soon or that the platform is far away. A suitable facial expression would give the addressee the opportunity to act accordingly to try and catch his train.

On another level, the works discussed below tackle the issue of the nature of the function relating a gesture accompanying a propositional content and the speech act itself. The main concern is whether gestures express a propositional content (by adding some content-related information) or realise the illocutionary force of the communicative act (e.g., as mentioned above, by transforming what could be seen as a request into an order or vice versa).

Fein and Kasher (1996) see three possible functions: (1) gestures vary with both the illocutionary force and the propositional content, (2) gestures vary only with the illocutionary

force or (3) gestures vary just with the propositional content. [Fein and Kasher's \(1996\)](#) study (on comics gestures) suggests that gestures vary mainly with the illocutionary force of an utterance.

For his part, [Kendon \(2000\)](#) notes that, not only do addressers use gestures to provide additional content or precision regarding pragmatic aspects of the utterance, but they can also change their gestures in order to recast an utterance as an other speech act. Gestures indeed do take part in the production of communicative acts in a variety of ways.

Now, [Bressem et al. \(2013\)](#) highlight that gestures with a representational function (e.g. iconic or metaphoric gestures) or a referential function (e.g. deictic gestures) can express propositional content, while gestures with a performative function (i.e. gestures that indicate the type of communicative act the addresser is engaged in, e.g. deictic gestures) realise the illocutionary force. All in all, they recognise three types of gestures in terms of their relation to communicative acts: (1) gestures expressing a propositional content, (2) gestures relating to the illocutionary force and (3) gestures affecting the perlocutionary force. Note that the study presented in this paper is not concerned with the latter.

3 Research Questions

To shed some more light on the role of gestures in the production of communicative acts, the following sections report on a pilot experiment into both the place and the contribution of hand gestures, namely it (1) addresses the question to what extent verbal and non-verbal components are needed in the making of illocutionary acts and (2) investigates whether and which hand gestures do contribute to the illocutionary force or to the propositional content. In other words, the research questions can be formulated as follows: Can iconic, deictic or metaphoric gestures be used without speech to produce an illocutionary act by themselves? Are deictic, iconic or metaphoric gestures redundant with the word(s) they accompany or is this the other way around, i.e. are words redundant with the gesture they accompany? In the making of what kind of illocutionary acts are these gestures used? Do these gestures contribute to the propositional content or rather to the illocutionary force?

4 Method

The pilot experiment was conducted in French (because it was easier to find participants since I was at a French-speaking university at the time of the experiment) and examined the use of deictic, iconic and metaphoric gestures produced during dyadic conversations, as those are the co-speech hand gestures that are communicative and thus apt for the production of illocutionary acts.

Basing myself on the literature, I have discriminated between deictic, iconic and metaphoric gestures as follows. Deictic gestures are pointing gestures that locate and spatialise people or objects. Both iconic and metaphoric gestures depict some aspects of something by virtue of their resemblance to it. The difference between them resides in that iconic gestures are directly formally related to the semantic meaning of a linguistic unit, so much so that they can depict features of what is described, that are or are not expressed in words, while metaphoric gestures are indirectly and abstractly related to the meaning of the linguistic unit they refer to and of which they depict the concept, that has no physical form.

There exists other types of hand gestures such as beats or emblems, neither of which has been considered for analysis because (1) beats are not seen as communicative and (2) emblems are not considered co-speech gestures, as they are often used alone as complete utterances (see [McNeill & Levy, 1982](#); [McNeill, 1985](#); [Kendon, 1986](#); [Cassell et al., 1999](#); [Haviland, 2000](#); and [Enfield, 2012](#) among others for detailed descriptions of all the types of hand gestures mentioned above).

4.1 Participants

Four participants, grouped into two pairs, took part in the experiment. At the time of the experiment, they were studying towards a master's degree in linguistics at the Université Libre de Bruxelles. All four of them were told they were taking part in a study on the way people express themselves so that they were naïve to the exact purpose of the study. They all participated voluntarily.

4.2 Materials

Participants were presented with a list of thirteen topics, more specifically social issues, which were picked because they were assumed to be easy to be talked about. Participants were

instructed to select and discuss at least two topics from that list. The topics were as follows: (1) inclusive writing in French, (2) the bilingual policy in Brussels, (3) unequal pay according to sex, (4) feminisation of trades names, (5) immigration policy in Belgium, (6) free tuition fees in universities, (7) gymnastics classes in schools, (8) the teaching of religions in schools, (9) the neutralisation of genders in language, (10) the place of advertising in the public sphere, (11) wearing ostentatious religious symbols in the public sphere, (12) the impact of the internet/new means of communication on love relationships and (13) the impact of the internet/new means of communication on the pupil-teacher relationship.

4.3 Procedure

The assignments (i.e. instructions and list of topics) were given on a sheet of paper taped to the table in front of the participants so that they would not pick it up and would still have their hands free to gesture. A camera recording the interactions for later analysis was placed on the same table. The participants were kept standing in the hope that this would lead to production of more gestures. In order for them to be at ease with both their speech and gestural production, each pair had twenty minutes for conversation. Each participant knew their interlocutor so that they were more comfortable and hopefully produced more gestures than if they had to converse with someone with whom they were not at all acquainted. To make sure that the participants were really at ease, (1) they were offered the opportunity to get to know me, the experimenter, while enjoying a sandwich before the experiment and (2) they were left alone during the whole interaction.

4.4 Data Treatment

The first five minutes of the two video-taped conversations were left out of the analysis because they were used by the participants to familiarise themselves with the task and get involved in the debate. The remaining fifteen minutes of each conversation were annotated for analysis.

The annotations were made using the software [ELAN](#) and the Linguistic Annotation System for Gestures ([Bressem et al., 2013](#)). This system has been designed to be compatible with ELAN and, on top of considering gesture phases, recognises four parameters of hand gestures: hand shape,

orientation, movement and position of the hand. Each of these parameters are then evaluated according to subcategories in terms of specific features (see [Bressem et al., 2013](#) for a detailed description).

The analysis was carried out in three steps: (1) I annotated all the features (i.e. phases and parameters) of gestures leaving out the sound production at first, (2) then I concentrated on the gestures' relation with speech and (3) I analysed the communicative acts produced. As the sole experimenter involved in the analyses, I did the evaluation twice (with a seven-month interval) to ensure the correctness and reliability of the annotations.

5 Analysis

For each example in this section, the italicised part corresponds to the analysed gesture in its entirety, that is from the initial position to the rest position (see [Kendon, 2004](#); and [Ladewig & Bressem, 2013](#) for a detailed description of all gesture phases).

5.1 Deictic Gestures

All in all, there were ten occurrences of deictic hand gestures.

The first pair of participants was discussing unequal pay according to sex and women in politics to begin with. They had then gone somewhat off-topic, and so the addresser in (5) points at her addressee when she says 'tu' (you) for the second time.

- (5) *Après tu m tu m'fais penser euh, quand t'as dit un truc tout à l'heure [...].*
"Then you m you make me think er, when you said something earlier [...]."

The deictic produced in this example seems redundant with the word it accompanies (i.e. both gesture and word seem to express the same meaning) but actually has two intertwined pragmatic functions: (1) it allows the addressee to better understand that he is the one who said something to which his interlocutor would now like to react and (2), because the addressee was starting to talk about something else, the addresser uses this gesture to indicate that she really wished to comment on her addressee's previous point. This gesture could actually draw the addressee's attention without speech (i.e. without the words used during the whole gesture

sequence), and is a contribution to the illocutionary force because, without the gesture, it would be a mere act of asserting some general state of affairs, but with the gesture, it can be interpreted as an act of informing someone in particular. This deictic can also be seen as a means of politely asking the addressee to stop talking for a moment so that the addresser can properly comment on the addressee's previous point before turning to an other idea. If the second interpretation is accepted, we can argue that the gesture in (5) transforms what would be an assertion without the gesture into a directive, namely a polite request. So in the former case, the illocutionary act is the same, that is an assertive, but the illocutionary force varies from asserting to informing. While in the latter scenario, the illocutionary act (and consequently, of course, the illocutionary force itself) changes from assertive into directive. Since this gesture has a performative function in both cases, it undeniably impacts the illocutionary force of the whole utterance.

The same participants were now talking about the neutralisation of genders in language. In (6), after an inaudible remark from one of them, the other participant points at her interlocutor with a palm up open hand gesture when she says 'bien' (*well*).

- (6) *Oui, bien dit !*
 "Yes, well said!"

Because such a gesture conventionally shows openness, it is redundant with the speech but helps the addressee to better understand that there is agreement on the addresser's side with what he said before. Because it refers to the addressee and what he said previously, this deictic gesture has a referential function and would actually do a good job without any words, as it alone already expresses the propositional content. Note that, if this gesture were to be used without any words at all — which, as just suggested, could be the case — it would additionally realise the illocutionary force and thereby also have a performative function. Either way, the communicative act is an expressive.

Before the inaudible remark previously mentioned, the participant had actually talked in the direction of the camera. In (7), the co-participant imitates her interlocutor by turning towards the camera. She makes a palm lateral

open hand away from body gesture with both hands to point at it between 'T'as fait un' (*You were*) and 'face public' (*facing the public*) so as to indicate where the 'public' is.

- (7) *T'as fait un ... face public.*
 "You were ... facing the public."

This gesture gives information as to the spatialisation, which helps the addressee to better visualise what the addresser is referring to. The deictic in this example therefore definitely has a referential function. What is redundant in this case is the spoken part, as the pointing gesture appears before it and asserts exactly the same propositional content.

The participants were now discussing the wearing of ostentatious religious symbols in the public sphere. One of them was arguing that, religion being a private matter, no one ought to order someone to do something on the basis of one's beliefs. To illustrate her point, the addresser produces the quotation in (8), where she is imitating someone ordering a religious person to kneel by pointing towards the ground, which renders the description more vivid for the addressee.

- (8) *Et tu peux pas dire : « Ah il faut que tu fasses euh que tu te mettes à genoux et que tu applaudisses ».*
 "And you cannot say, 'Ah you have to do er to kneel and to applaud'."

As it alone already produces a directive, the gesture has a performative function and is consequently a contribution to the illocutionary force no matter what. Now, if there was only speech without the gesture, it could be a suggestion. On the other hand, if we only had the gesture production, it would undoubtedly lead to the interpretation of an order. But, as in this case speech is actually not central, it is clear that the gesture also expresses an order. The addresser points with a fully stretched index finger and the movement is enlarged and accelerated, which, as I would like to argue, are features linked to giving (strong) orders rather than making (kind) suggestions. Note that the gesture realises the illocutionary force of the quoted utterance only and not that of the whole utterance issued by the addresser, that is the illocutionary force of the utterance that includes the quoting frame is in no way affected by the gesture.

The example given below is similar to (8) in that the addresser places her addressee in the role of a person who is told what is good and what is bad by pointing at him as she says 'tu' (you).

- (9) C'est comme montrer aux gens : « Tu vois, ça c'est bien *et c'que tu fais, c'est mal* ».
"It's like showing people, 'You see, this is good, *and what you do is bad*'."

As with (8), the gesture in (9) affects only the quoted utterance and not the utterance comprising the quoting frame. If speech was absent from the quoted utterance, the gesture alone could not express the whole proposition. But the gesture is also indispensable, as it emphasises the word it accompanies and in fact has a performative function. It contributes to the illocutionary force because, without the gesture, the quoted utterance would be an act of informing, but with it, it is an act of stating, which is a bit stronger. The gesture here really serves as a means to make the (impersonated) addressee realise that what *he* does is bad.

In (10), the addresser points at her forehead as she discusses the fact that making a young Muslim girl wear a scarf is equivalent to writing on her forehead that she will have to live as a woman all her life, that is under the conditions one stereotypically associates with Muslim women.

- (10) Surtout, *tu lui écris sa condition d'femme sur le front quoi hein*.
"Mostly, *you write her her condition as a woman on the forehead huh*."

The gesture used here seems redundant with the words, but with it, the addressee's attention is drawn on the forehead, which emphasises the whole point. Alone, this gesture would not make sense of the whole proposition, but if speech were partially absent, the gesture would undoubtedly contribute to the propositional content. In any case, this deictic has a performative function and definitely contributes to the illocutionary force, or in this case to the strength, as it transforms an assertion into a claim.

The following utterances in this subsection were produced by the other pair of participants. They first decided to debate the impact of the internet/new means of communication on love relationships. More specifically, they were

talking about Tinder. In (11), the addresser points at herself as she says 'moi je' (I).

- (11) *Après euh moi j'ai une fille j'ai une une amie, qui était très proche avant [...]*.
"*But then er I have a girl I have a a friend, who was close to me back then [...]*."

Here speech cannot be left out, but the gesture is useful because, with it, the addressee better understands that the addresser is currently referring to herself. The gesture thus has a referential function and reinforces the propositional content expressed in words. Now, whether with or without the gesture, it is an act of informing.

The participants are now talking about the teaching of religions in schools, and the addresser who utters (12) points at herself while she says 'moi' (I).

- (12) *Moi c'est moi j'ai toujours été en école catholique*.
"*I it's I I've always been in a Catholic school*."

As with (11), the gesture in (12) has a referential function and is, just as the word it accompanies, part of the propositional content since it basically highlights who is speaking. In this case, the deictic gesture indeed does not have any performative function since the act of informing is not modified by the gesture. Therefore, it cannot be seen as a means to alter the illocutionary force. Also, this gesture could not be understood without speech.

The second group of participants picked up a third topic: the place of publicity in the public sphere. One of them underlined the crucial absence of publicity concerning autistic children outside the university walls. The participants had indeed previously seen such an advertisement on the next door. In (13), the addresser points in the direction of the door she is talking about.

- (13) *Y a pas de pub pour les enfants autistes euh comme on a vu sur la porte à côté*.
"*There is no publicity for autistic children er as we saw on the next door*."

As the spatialisation of the door is not given in words, the gesture adds information to the propositional content. And actually, speech could partially be absent without altering the assertion,

as the place of the advertisement is known to both interlocutors. The utterance would indeed still make sense without ‘sur la porte à côté’ (*on the next door*) since the referential deictic gesture gives all the information that is needed. As with the latter two examples discussed above, the deictic gesture in (13) cannot realise the illocutionary force since it has a referential function only.

In (14), the addresser points in the exact same direction while talking about the corridor.

- (14) J’trouve que, *quand t’es dans c’couloir par exemple* [...].
 “I think that, *when you’re in this corridor for example* [...].”

As with the spatialisation of the door in (13), the information about the spatialisation of the corridor is not expressed in words, and the gesture is therefore not redundant since it adds that missing piece of information crucial for a good understanding of the propositional content of the statement. For their part, the words ‘dans c’couloir’ (*in this corridor*) could be absent without changing the point the addresser wishes to make, as the gesture alone refers to what is commented upon. Here again, because the deictic gesture has a referential function only, it cannot realise the illocutionary force.

To sum up, (5) and (8) could have been used without any words, and in both cases the gesture has a performative function and realises the illocutionary force of the utterance. In (9) and (10), though the gesture has the same function and also realises the illocutionary force, words are indispensable. It is the other way around in (7), (13) and (14): as they could have been used without speech, the gestures in these examples are far more crucial than words, but they do not contribute to the illocutionary force in any way whatsoever and instead have a referential function. The expressive in (6) is a bit special in that it could have been produced without words and, in such a case where speech would have been absent, the deictic would have been a contribution to both the propositional content and the illocutionary force of the whole utterance. For their part, (11) and (12) illustrate examples where (1) speech can actually not be left out and (2) the accompanying gesture, which has a referential function, has no impact on the illocutionary force.

5.2 Iconic Gestures

This subsection discusses two examples of iconic gestures.

The first group was discussing inequality between men and women. In (15), the addresser was specifically recounting an anecdote concerning French politician Christiane Taubira, which illustrates that some women are not respected.

- (15) Christiane Taubira, qui qui vient de je n’sais plus quelle région outre-A *oultre-Atlantique euh de France tu vois genre euh* [...].
 “Christiane Taubira, who who comes from I don’t know which region across the *across the Atlantic er of France you know like er* [...].”

While saying ‘France’, the addresser depicts the country with a palm down open hand gesture with her hand making a circular movement. As all five fingers are fully stretched, which renders an idea of width, it indicates that the country is big. So, thanks to the gesture, the addressee acquires additional information (concerning the size of the country) with regard to the assertion. Since the iconic gesture in this example adds content-related information and has a representational function, it contributes to the propositional content. Nonetheless, speech is also important here, as the gesture would not make sense alone.

The following utterance was produced while the second pair of participants was talking about new technologies. In (16), the addresser is imitating someone who sticks tape on their computer’s camera in order to avoid being videotaped unawares.

- (16) *Tu vois, genre, j’ai toujours trouvé ça ridicule les gens qui mettent des des scotchs sur leurs ordinateurs, mais je l’fais maintenant quoi.*
 “*You know, like, I always thought it was ridiculous people who put sticky tape on their computers, but I do it now.*”

As she mentions the tape, the addresser depicts its position and size with the help of her fingers: her thumb and index are bent parallel to each other. These pieces of information (i.e. position and size) are not expressed in words and the gesture is thus crucial, but so is the spoken part in order to make a well-formed assertion. This

gesture only impacts the propositional content and is not able to realise the illocutionary force, as it has, as with the previous example, a representational function.

The two iconic gestures discussed in this subsection are very similar in that, in both of these examples, the gesture is essential, as it gives pieces of information not expressed in speech. Nonetheless, neither of them could be understandable alone. As the gesture has a representational function in the two cases, it is impossible for either iconic to impact the illocutionary force.

5.3 Metaphoric Gestures

Eight metaphoric gestures are discussed in this last subsection.

Let us consider again the first group of participants. The addresser in (17) is talking about equality between men and women and the degree of access they can gain in politics and companies.

- (17) En fait, j'pense que *c'est l'accessibilité ... J'crois que [...]*.
“Well, I think that *it's access ... I think that [...]*.”

In this example, the addresser illustrates ACCESS by making a large palm up open hand gesture towards her interlocutor, which echoes the concept for a better understanding on the part of the addressee. The gesture thus has a representational function and is therefore part of the propositional content, that is of the stated viewpoint. This metaphoric gesture cannot make sense alone.

The participants were now discussing the idea that one cannot just force change on languages because they evolve naturally of themselves.

- (18) *Les langues genre tendent toujours à la simplification tu vois, de plus en plus, tu vois.*
“Languages like they always tend to simplification you know, more and more, you know.”

When the addresser says ‘tendent’ (*tend*), she moves her hand in front of her, so much so that her arm is fully stretched. Then she repeats the movement on ‘de plus en plus’ (*more and more*) to indicate that languages become more and more simple, which helps the addressee to visualise the evolutionary process of languages.

In other words, as with (17), the metaphoric gesture illustrated here has a representational function and contributes to the propositional content only. The gesture, though very helpful, could not be used by itself and needs speech to produce a coherent assertion.

Following the discussion on the Islamic veil mentioned earlier, the addresser in (19) is reflecting on the problems a Muslim woman may encounter because of her religion once she is trapped in a cycle of beliefs.

- (19) Parfois, quand t'es quand t'es dans l'engrenage, tu t'rends pas compte de ces choses-là.
“Sometimes, when you're *when you're in the cycle*, you don't realise those things.”

When she says ‘engrenage’ (*cycle*), the addresser uses a metaphoric gesture that imitates a cyclic movement to echo her words. This gesture thus has a representational function. It could be used without speech, but the addressee may understand a (close but) slightly different idea. For example, this gesture could be interpreted as meaning ‘brainwashed’ (instead of ‘in the cycle’). With both speech and gesture the addressee, however, gets the whole picture and the stated propositional content is crystal clear.

The following utterances were issued by the second group. Recall these participants discussed, amongst two other topics, the impact of new technologies on relationships. The utterance in (20) was issued while they were more specifically talking about Tinder.

- (20) À un moment, *ça a pris d'importance.*
“At one point, *it took on importance.*”

The addresser in this example metaphorically shows to what extent applications such as Tinder took on importance by using both hands with a palm up away from body gesture, fully stretched fingers and enlarged movement indicating amplitude, which indirectly relates the gesture to the word it accompanies, namely ‘importance’. The gesture thus has, here again, a representational function and thus contributes to the propositional content. As with (19), the gesture could be used alone but with a possible slight change in the interpretation of the statement: one could understand ‘it exploded’ instead of ‘it took on importance’, which is a bit farther on the continuum.

One of the participants now develops the idea that the problem with new technologies does not come from the devices we use but rather from the fact that people are not properly educated to correctly use them. In the following example, as the addresser says ‘éduquer’ (*educate*), she makes a rolling movement that metaphorically indicates improvement, thence education.

- (21) *Et d’éduquer d’éduquer à ça en fait.*
 “And to educate to *educate on that actually.*”

The gesture in (21) could not make sense without any speech, but it helps the addressee to visualise the concept EDUCATION. This gesture therefore has a representational function and indeed does not affect the illocutionary force, as the act is in all cases an act of stating.

In (22), the addresser argues that there are much safer communication platforms than the new Messenger that Facebook created for children.

- (22) *Y a d’autres plateformes de communication beaucoup plus sûres.*
 “*There are other much safer communication platforms.*”

Here the addresser metaphorically illustrates COMMUNICATION by using both hands, palms facing each other vertically, with crooked fingers in a spiral movement to indicate connection, which helps the addressee to better visualise the concept. Once again, the gesture is part of the informative propositional content, as it has a representational function, and it could not be understood alone.

The addresser in the example below is saying that computing is too abstract for her, so much so that it escapes her. She illustrates ABSTRACTION by making a large gesture with flat hands away from her body.

- (23) *C’est tellement abstrait pour moi, l’informatique, que euh pff [...].*
 “*It’s so abstract for me, computing, that er pff [...].*”

Since the concept of ABSTRACTION is mentioned in words, the gesture is redundant with part of the spoken component of the informative utterance. This metaphoric gesture has a representational function and is part of the propositional content. Here the gesture could

make sense without speech but not without altering it. Without the accompanying word, the gesture could be interpreted as meaning ‘complicated’ (instead of ‘abstract’).

The utterance considered hereafter was produced while the participants were discussing publicity about autistic children and research on the subject.

- (24) *T’es tellement coupé du monde dans la recherche.*
 “*You’re so cut off from the world in research.*”

In this example, the addresser metaphorically shows a wall with a palm vertical open hand gesture to indicate that researchers are cut off from the world. For emphasis, the gesture is repeated in a zigzagging movement, which visually indicates to the addressee that there is a clear-cut separation between researchers and the rest of the world. Redundancy with speech is therefore undeniable even if, if used alone, this gesture could express REJECTION, which is still pretty close to the idea expressed in words. As with the other examples in this subsection, the gesture in (24) contributes to the propositional content since it has a representational function, as it gives a visual illustration of what is claimed in words.

As a conclusion, the gestures produced in (19), (20), (23) and (24) could have made some sense without words but not without a possible change in interpretation. As for the gestures in (17), (18), (21) and (22), there is no way they could have been used alone. None of the examples discussed in this subsection realise the illocutionary force. Instead, they all contribute to the propositional content, as all of them have a representational function.

6 Results

No participant used gestures alone, whether deictic, iconic or metaphoric. Consequently, no gesture produced an illocutionary act by itself, that is without speech production. However, six of the deictics could have been understood without any accompanying words and four metaphoric gestures could have rendered a close idea of what was expressed orally. The difference most certainly lies in that deictics are usually conventionalised, whereas iconic and metaphoric gestures are not.

Regarding redundancy, only two iconic and two deictic gestures added extra information. Nonetheless, it is worth highlighting that, for most deictics, it is actually not the gesture that is redundant with the words it accompanies. In fact, for those deictics that could have been used alone, it is the accompanying words that are redundant.

Now, except for one or two directives (depending on interpretation) and one expressive, all gestures were used in the making of assertive acts.

With regard to the contribution of gestures, this study has confirmed that iconic and metaphoric gestures, that is gestures that have a representational function, cannot realise the illocutionary force and typically contribute to the propositional content only, as they exclusively depict (some) aspects of what is being talked about. The deictics that have a referential function also contributed to the propositional content. That being said, four deictics (i.e. those that have a performative function) realised the illocutionary force (or strength in one case). Nonetheless, in some cases where speech could have been (partially) absent, the deictic could have been linked to both the propositional content and the illocutionary force at the same time. This observation broadens the general idea — discussed in the background section — that deictics can be linked either to the propositional content or to the illocutionary force. This should, however, be further investigated in future research concentrating on the use of deictic hand gestures more specifically.

7 Discussion

The literature on speech act theory (and related) does more than mentioning that, apart from words, so-called non-verbal communicative elements, such as sighs, facial expressions, body movements and the like, can also be used to produce communicative acts (see [Austin, 1962](#); [Searle, 1969](#); [Bierwisch, 1980](#); [Clark, 1996](#); [Wharton, 2009](#); [Cuffari, 2012](#); and [Sperber & Wilson, 1995, 2012a, 2012b, 2015](#), to mention but a few). However, it seems fair to say that speech act theory, though it has been discussed for more than half a century now, has not given much room for an in-depth study of hand gestures. This paper did not have the pretence of doing them full justice, but the purpose was at

least to give gestures a (bigger) voice in this specific subfield of pragmatics.

This paper described a qualitative study of communicative hand gestures produced during conversations and their relation to the propositional content and/or the illocutionary force. In the pilot experiment presented here, I was open to the study of all illocutionary acts but found that participants tend to extensively produce assertives more than other communicative acts. Besides that, and as already mentioned in the previous section, no gesture was used without speech even though the words accompanying the gesture were sometimes redundant with it. For these two reasons, further research should design experiments enabling the investigation of both assertives and non-assertives that would be made up of gestures only. More concretely, because (1) deictics showed some potential for being used in the production of directives and expressives, (2) most of them could have been understood without words and (3) some of them contributed to the illocutionary force, this preliminary investigation leads to the question whether deictics could produce directives, expressives or any other acts without any speech. In fact, if the deictic gesture has a performative function and if it alone expresses content-related information, then it would both realise the illocutionary force and contribute to the propositional content.

Remember I have argued that, if the index is fully stretched and the movement is enlarged and accelerated, the gesture will be interpreted as expressing an order rather than a suggestion, for instance. In more general terms, it means that, depending on their shape (e.g. fully stretched index finger versus palm up open hand) and movement character (enlarged versus reduced and accelerated versus decelerated), deictics express different forces. It is thus not farfetched to further hypothesise that, if used alone, two deictics varying in shape and movement character would be interpreted as two (slightly) different illocutionary acts. And again, these deictic gestures would both contribute to the propositional content and realise the illocutionary force simultaneously. To verify this hypothesis, further research should design a study that investigates the use of pro-speech deictic hand gestures.

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References

- Austin, John L. (1962). *How to do things with words*. Oxford: Clarendon Press.
- Bierwisch, Manfred (1980). [Semantic structure and illocutionary force](#). In John R. Searle, Ferenc Kiefer, & Manfred Bierwisch (Eds), *Speech act theory and pragmatics (Texts and Studies in Linguistics and Philosophy, 10)* (pp.1-35). Dordrecht, Boston: D. Reidel.
- Bressem, Jana, Ladewig, Silva H., & Müller, Cornelia (2013). [Linguistic annotation system for gestures](#). In Cornelia Müller, Alan Cienki, Ellen Fricke, Silva Ladewig, David McNeill, & Sedinha Tessendorf (Eds), *Body - language - communication: An international handbook on multimodality in human interaction (Handbücher zur Sprach- und Kommunikationswissenschaft (HSK), 38(1))* (pp.1098-1124). Berlin, Boston: De Gruyter Mouton.
- Cassell, Justine, McNeill, David, & McCullough, Karl-Erik (1999). [Speech-gesture mismatches: Evidence for one underlying representation of linguistic and nonlinguistic information](#). *Pragmatics & Cognition*, 7(1), 1-33.
- Clark, Herbert H. (1996). *Using language*. Cambridge: Cambridge University Press.
- Cuffari, Elena (2012). [Gestural sense-making: Hand gestures as intersubjective linguistic enactments](#). *Phenomenology and the Cognitive Sciences*, 11(4), 599-622.
- Enfield, Nick J. (2012). [The anatomy of meaning: Speech, gesture, and composite utterances](#) (*Language, Culture & Cognition*, 8). New York, Cambridge: Cambridge University Press.
- Fein, Ofer, & Kasher, Asa (1996). [How to do things with words and gestures in comics](#). *Journal of Pragmatics*, 26(6), 793-808.
- Haviland, John (2000). [Pointing, gesture spaces, and mental maps](#). In David McNeill (Ed.), *Language and gesture (Language, Culture & Cognition, 2)* (pp.13-46). Cambridge: Cambridge University Press.
- Kendon, Adam (1986). Some reasons for studying gesture. *Semiotica*, 62(1/2), 3-28.
- Kendon, Adam (2000). [Language and gesture: Unity or duality?](#) In David McNeill (Ed.), *Language and gesture (Language, Culture & Cognition, 2)* (pp.47-63). Cambridge: Cambridge University Press.
- Kendon, Adam (2004). *Gesture: Visible action as utterance*. Cambridge, New York: Cambridge University Press.
- Ladewig, Silva H., & Jana, Bressem (2013). [A linguistic perspective on the notation of gesture phases](#). In Cornelia Müller, Alan Cienki, Ellen Fricke, Silva Ladewig, David McNeill, & Sedinha Tessendorf (Eds), *Body - language - communication: An international handbook on multimodality in human interaction (Handbücher zur Sprach- und Kommunikationswissenschaft (HSK), 38(1))* (pp.1060-1079). Berlin, Boston: De Gruyter Mouton.
- McNeill, David (1985). [So you think gestures are nonverbal?](#) *Psychological Review*, 92(3), 350-371.
- McNeill, David, & Levy, Elena (1982). Conceptual representations in language activity and gesture. In Robert J. Jarvella & Wolfgang Klein (Eds), *Speech, place, and action: Studies in deixis and related topics* (pp. 271-295). Chichester: John Wiley.
- Searle, John R. (1969). *Speech acts: An essay in the philosophy of language*. London: Cambridge University Press.
- Sperber, Dan, & Wilson, Deidre (1995). *Relevance: Communication and cognition*. Oxford: Blackwell.
- Sperber, Dan, & Wilson, Deidre (2012a). [A deflationary account of metaphors](#). In Deidre Wilson & Dan Sperber (Eds), *Meaning and relevance* (pp.97-122). Cambridge, New York: Cambridge University Press.
- Sperber, Dan, & Wilson, Deidre (2012b). [Introduction: Pragmatics](#). In Deidre Wilson & Dan Sperber (Eds), *Meaning and relevance* (pp.1-28). Cambridge, New York: Cambridge University Press.
- Sperber, Dan, & Wilson, Deidre (2015). Beyond speaker's meaning. *Croatian Journal of Philosophy*, 15(44), 117-149.
- Wharton, Tim (2009). *Pragmatics and non-verbal communication*. Cambridge: Cambridge University Press.