

A TOOL AT HAND: GESTURES AND RHYTHM IN LISTING EVENTS CASE STUDIES OF EUROPEAN AND AFRICAN PORTUGUESE SPEAKERS

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RESUMO

Este artigo explora os gestos e os movimentos do corpo na interação face a face a partir uma perspectiva etnográfica dos estudos do gesto. A análise centra-se na comparação entre os gestos de listar e outros meios usados para apoiar a atividade de elaborar uma lista. Os aspetos considerados são as características formais e o ritmo dos gestos, e a sua coordenação com as unidades lexicais correlacionadas dos enunciados. O corpus recolhido para esta análise consiste em quatro interações com falantes de diferentes culturas, cuja atividade de listar foi examinada em termos de características morfológicas e padrões rítmicos, com o objetivo de detetar tanto regularidades como diferenças (culturais) nos gestos de listar.

[1] INTRODUCTION

The main question I will explore in this paper is how listing activities, so frequent in face-to-face interaction, are performed in different languages/cultures. In spite of being aware of the impossibility to generalize the results of these case studies, this paper offers some examples of different forms of making lists, of how hand gestures are coordinated with speech and how these modalities work together: not only in making a list, but also in making the list visible for the hearer. This article is divided into three parts: an overview of the theoretical background (section [2]), the description of listing gestures, their subdivisions and further aspects related to their use (section [3]), and the micro-analysis of some parts of the recorded *corpus* (section [4]). The *corpus* consists of four interactions: the first between European Portuguese speakers speaking Portuguese, the second between German speakers speaking German, the third and the fourth between Angolan speakers speaking Portuguese. The analysis considers speech – lexical items and prosody – and co-speech body movements, or kinesic modalities, above all gesture, head and trunk movements and gaze orientation.

[2] THEORETICAL PRELIMINARIES

This linguistic approach of speech and gesture involves an interdisciplinary theoretical background: 1) several orientations of Conversation and Discourse Analysis (e.g. [Sachs et al. \(1974\)](#); [Henne & Rehbock \(1982\)](#); [Roulet et al. \(1985\)](#)) and Contextualization Theory (e.g. [Gumperz \(1982a, 1992\)](#)); 2) Interactional Linguistics (cf. [Selting & Couper-Kuhlen \(2000\)](#)); 3) and Gesture Studies ([Ekman & Friesen \(1969\)](#); [Goodwin \(1981\)](#); [Hall \(1974\)](#); [Kendon \(2004\)](#); [McClave \(2000, 2001\)](#); [McNeill \(1992, 2000\)](#); [Müller et al. \(2013, 2014\)](#)).

The first group allowed to consider face-to-face interaction (a) as an activity that is reciprocally and simultaneously constructed by speaker and hearer; and (b) as a phenomenon comprising different levels: the level of thematic development, the level of structural relations between units, the level of emotion and modalization, and the level of the interpersonal relations between speaker and listener regarding their interactional roles ([Galhano Rodrigues \(1998, 2007\)](#)). The second group offers the framework for the analysis of prosody. Its principles, developed from the Contextualization Theory of [Gumperz \(1982b\)](#), view prosodic phenomena as important contextualization cues for the codification and decodification of speech. The categories of analysis within these theories were conceived to access prosody from a pragmatic point of view, so that they are flexible enough to explain prosodic variations caused by different kinds of spontaneous phenomena in the interactional context. Gesture Studies, on its turn, represents the background for the description of gestures and other body movements in their relation to speech.

The following units and their subdivision were taken into account for speech segmentation: the turn-taking system ([Sachs et al. 1974](#)), which corresponds to the exchange in Discourse Analysis theory ([Sinclair & Coulthard 1975](#); [Moeschler 1987, 1994](#)); the turn ([Goffman 1974](#), pg. 201); the conversational acts ([Henne & Rehbock 1982](#), pg. 17); and the conversational signals ([Galhano Rodrigues 1998](#)).

For the description of the prosody, were considered the following categories and phenomena: intonational unit, pitch, intensity, quantity, beat-clashes and rhythm (e.g. [Auer & Couper-Kuhlen \(1994\)](#)), silent pauses, full pauses and sound elongations (e.g. [Boomer & Dittman \(1962\)](#); [Goldman-Eisler \(1972\)](#); [Selting \(1988\)](#); [Uhmann \(1992\)](#)).

Regarding gestures, a fundamental concept for their identification is the gesture unit, which is composed of gesture phrases (gestures) that can be divided into different phases: preparation, stroke and retraction (([Kendon 1980](#), pg. 214) ([McNeill 1992](#), pg. 83)). The identification of units in other body movements is more complex, as the various body parts have very different (and sometimes very subtle) features when it comes to movement shape and direction. The trunk is the body part that makes the least complex movements: it can only move forwards, backwards, and to both sides, according to two axes. Eye movements are slightly

more complex, because they involve the direction one is looking at, as well as the position of the eyes in the ocular globe, eye-lid movements and the degree of eye opening. Linked to eye movement is eyebrow-raising, here included in the group of facial expressions. Due to technical constraints, only the movements of the mouth and eye region were taken into account, while the micro-movements of the face had to be left aside. Thus, in the case of less defined or more complex movements, movement units — as I called the units considered for the other parts of the body — are limited by the points of the greatest amplitude (which can, in fact, be minute) of its trajectory. Another unit is, for instance, the period of time a gaze is kept in a certain direction. In this case, we cannot talk about a movement, but about a movement-freezing, in other words, a static unit.

[3] LISTING GESTURES

It is common knowledge that when people make lists of items, be they objects, feelings, problems, situations, theories, etc., they tend to use some cues to inform the interaction partner(s) that they are listing a certain number of items. This quantity of items is supposed to be small enough to be counted with the fingers (from 5 to 10), or big enough to justify the use of a support that helps speakers organize their speech, so that the hearers know which elements of the utterance belong together and constitute a listing unit. This structuring support is given by different kinds of “tools”. One of these tools is prosody: prosodic cues like pitch, intensity and speech rate, as well as voice quality, are important discourse markers. They can show which parts of the utterances belong together. The ‘asides’, which are generally performed at a higher speech rate, a lower and constant pitch and a lower voice quality, are a good illustration of this. Prosodic cues are also important for the creation of rhythmic patterns and rhythm. A rhythmic pattern is established after the repetition of three similar prosodic patterns. Rhythm creates expectations in the hearers (cf. (Auer & Couper-Kuhlen 1994, 82 segs) (Galhano Rodrigues 2007, pg. 175)), since after each unit in a rhythmic sequence the hearers expect to hear another unit with the same rhythmic pattern. In the case of listing lists, the prosodic pattern is characterized by an ascending pitch at the end of the intonational unit (in this case, the intonational unit coincides with the *listing unit*). This ascending pitch also indicates that something else is going to be said; in other words, its function is to keep the hearers’ attention and to focus this attention on what is going to be said next (this ascending pitch can also be described as a conversational opening signal, cf. Galhano Rodrigues (2007, pg. 509)). Most of the times, prosodic prominence coincides with the *countable item*, i.e., the most important topic. According to Erickson (1992), listing events are characterized by the fact that each new item of information is introduced at a regular rhythm, with identical time intervals between the information units. As a rule, the primary accents fall on the most important topics of the listing list and

they build up the rhythmic beats. In order to maintain the regular time intervals, some adaptations are made during speech production by resorting to both a strategic choice of syntactic structures and variations in speech rate (Erickson 1992, pg. 389). Thus, we could talk of an ideal *listing activity* composed of several *listing units*. Each of these units contains a single important idea or topic; it is accompanied by a *listing gesture*, and it has typical prosodic properties, namely, typical prosodic boundaries in relation to the other units. In sum, the listing units coincide with the intonational units.

Another tool 'at hand' (figuratively and literally), which conveys visible cues to the hearer(s) and proves very efficient for both speaker and hearer/observer, consists in the use of the hands and fingers. Due to its morphological features, this physical (bodily) tool allows to allocate different items to different parts (fingers), helping to organize speech and functioning as a kind of 'mnemotechnical' and structuring means. Given that it fulfils this function so efficiently, it is no wonder that listing gestures are used in many different cultures. The question, however, is whether their use and function can be regarded as universal, and whether there is a great discrepancy between this ideal form and the empirical evidences.

In the Portuguese culture as well as in many southern European cultures, the listing gesture unit is composed of several gesture phrases. In each of these gesture phrases (I shall call them *gestures* here), one finger of one hand is touched or pressed by the pointing finger of the other hand, or even grasped and shaken with the other hand, depending on the speaker's intensity, involvement and emotion. The listing action also has its order: it begins with the little finger and ends with the thumb and, whenever necessary, the same procedure is repeated with the same or with the other hand. The listing gesture and the way the listing activity proceeds can vary not only within the same culture, but also across cultures: it can be performed with one or both hands. In the second case, several features can differ: the trajectory and the position of the active hand, i.e., the hand whose index finger touches the fingers of the other hand; the sequence of the listing fingers, i.e., one can start listing with the number one on the little finger or on the thumb. For instance, in Northern European countries, people generally use one hand and list the first topic by stretching their thumb out and upwards (while keeping the other fingers closed), the second topic, by stretching out the index finger, the third topic, by stretching out the middle finger, and so forth. Sometimes both hands are used, and the *list fingers* (the fingers used 'embodying' the topic) are touched with the index of the other hand. In Southern Europe, the Portuguese listing gesture described above dominates: that is, people use both hands, one as the listing hand, and the other as the 'listable hand' and they start listing with the number one on the little finger. However, in some cases, the listing gesture is performed with one hand only, where the thumb functions as active listing finger successively touching the other fingers, and starting the little fin-

ger. When number five is reached (i.e., when the thumb of one hand touches the thumb of the other hand) the thumb bends against the palm of the hand (and the hand is closed). It is important to note that these remarks are not the result of a systematic study, but some general empirical observations and annotations I have collected in these past few years. In fact, when listing is explored in a systematic way, other interesting details can be found such as, for instance, the regularity, intensity and amplitude of the movements in relation to the listed items, which, in their turn, are correlated to the speaker's emotions and motivation in communicating.

To facilitate the description of listing gestures and account for their precise synchronization with speech and prosodic prominence, it is essential to distinguish between the different phases of a listing gesture. Here the listing gesture is defined as a gesture-unit composed of several gesture-phrases whose function is to enumerate instances, objects, events, etc. Each gesture accompanies a *listing act*; in other words, its function is to accompany the verbalization of one element within the set of elements to be counted. This act coincides with the listing unit, as mentioned above. According to the subdivisions of the gesture-units, these gestures are also composed of preparation, stroke and retraction. But in the case of two-hand listing gestures, the part of the stroke with more amplitude is the moment when the index finger touches the finger of the other hand. For this reason, I use the term *touch* instead of stroke.

In the case of Portuguese, we may say that the most current form consists in the following phases:

- Preparation — one hand is open, with the palm almost turned upwards (*listable hand*); the other (*listing hand*) is raised, with palms downwards, index finger stretched, the other fingers relaxed or closed.
- Touch — the index finger of the listing hand touches/presses/grasps the little finger of the listable hand, positioned with the palm upwards.
- Retraction — the listing hand lets go of the finger and moves slightly upwards (together with the arm).

This sequence is repeated starting with the little finger, followed by the ring finger, the middle finger, the index and the thumb; then, the same procedure can be repeated with the same hand or the other way round, i.e., the listable hand becomes the listing hand. In an ideal listing activity, each topic or listed element is isolated from the others and iconically located on one finger only. Therefore, the fingers become markers for parts of speech and actively support discourse organization. Sometimes, when each topic involves more than one act (for instance a longer sequence, with side sequences), fingers may be pressed and held down for the entire period of time during which these acts are verbalized. Furthermore,

the very first gesture already signals the beginning of a listing activity. Thus, from this moment onwards, the hearers will expect the speaker to keep his/her turn at least for the time it takes to finish the listing activity. Irrespective of the number of listed topics, the information related to them, or of whether the list is complete or not, this first gesture functions as an announcement¹, giving instructions about what is going to happen next. Finally, if we compare prosody and listing gestures in terms of their efficiency in supporting discourse organization, we identify an interesting pragmatic difference: whereas the listing gesture immediately provides clues about the kind of activity which is going to follow, the prosodic pattern of a first listing unit alone cannot be said to have the same effect, and may not be recognized as the first item in a listing list. This is explained by the fact that, as mentioned earlier on, a rhythmic pattern is achieved and perceived only after the repetition of, at least, three units with the same prosodic pattern. A further point can also be considered in this “cultural” approach: it has to do with the distance between interaction partners, gesture space, movement forms, body postures, and gesture morphology (i.e., the way arms move, their direction and trajectory, the shape of the hands, the angles at the articulation points) (Galhano Rodrigues 2010).

[4] CASE STUDIES: LISTING GESTURES IN SEVERAL CULTURES

This part presents a micro-analysis of listing activities in different cultures. Each section within this part examines a single case. Thus, Case One (section [4.1]) describes a listing activity performed by European Portuguese native speakers; Case Two (section [4.2]) analyses a listing activity performed by German speakers; and Case Three (section [4.3]) and Case Four (section [4.4]) examine two examples of listing activity by Angolan speakers speaking Portuguese.

[4.1] *Case One: European Portuguese native speakers*

Three Portuguese female students talk about gender roles giving the example of their own parents. In the interaction interval transcribed below, the speaker, LV, the student sitting in the middle, is saying that women come home from work and have to do all the housework, while men come home from work and do nothing.²

[1] Announcements are the metacommunicative preparatory and focusing acts as the topographic opening signals (Galhano Rodrigues 2007, pgs. 200–203, 490–491, 502–504), one kind of conversational signals (Galhano Rodrigues 2001, pgs. 448–449). The conversational signals are polisemic and polifunctional and can, in different proportions, assume interactive, topographic, modal and turn-taking functions (Galhano Rodrigues 1998, 70 sec). Conversational act is the communicative unit produced simultaneously by speaker and hearer (Galhano Rodrigues 2007, pg. 222).

[2] Prosodic transcription after the GAT system (Selting et al. 1998).

Prosodic transcription / movements' description

- 1-38 LV: !`-NÃO!=-É::`fA-zem:- ``fA`ZEM ``tu`do;
 no! really, they do do everything
 |-----| |-----|
 | | |
 looks at VB, raises her head slightly looks up and then down to her hands
- 1-39 (0,115) -dE:sde=`AlmOçOs e ↑`jan-tares em ``CA:::sa-
 from lunches and dinners at home
 -----| |-----| | |-----|
 | | | |
 touches left little finger with thumb of other hand raises hand (retraction) touches left ring finger and holds it backwards; at 'casa' lets go of left ring finger
- 1-40 `des`de -arru`mAr `as`CA::`sas.
 from tidying up the houses
 |-----|
 |
 touches middle finger with right thumb and pressures it backwards; at 'casas' looks at VB
- 1-41 desde- ↑ah'
 from ah
 -----|
 |
 always looking at VB, touches left index finger with right thumb, and holds it down; looks upwards; lowers hands, always holding right index.
- 1-42 (0,485) `fA`zem `mEs`mo=MUIto `MA`IS;
 they really do much more
 -----| |-----|
 | | |
 looks ahead, continues pressing left index with right thumb; head and gaze towards VB. parts her hands, palms up; turns head to the front, looks in front.
- 1-43 ↓`elas ``vêm de`trabalhar;
 they come from work
 -----|
 |
 moves hands to the front of the trunk; raises right hand at 'tra-', raises left hand at '-lhar'; turns head to the right and looks again at VB.
- 1-44 <<all> `a minha -mãe vem do`tra`balho>=às ↑`SEte,
 my mother comes from work at seven
 -----| |-----|
 | | |
 turns head to the front, looks to the front; moves left arm to the left side leans head slightly to the front, looks down; puts hands together in front of the trunk, back of the right hand against palm of left hand.

1-45 (0,538) `chE-ga a casa `tem`que `fa`zer o jan`TAR::;
 she gets home has to make the dinner
 ----- | | ----- | | ----- |
 | | |
 raises head at 'fazer' touches left ring finger with
 moves hands right index holding it backwards; maintains
 apart position; after 'jantar' turns head and
 looks at VB; moves hands apart.

1-46 `depois`-a`caba de`fa`zer o-jan`tar=`arrumar↑-TU::do-
 then she finishes making dinner tidies everything up
 | ----- | | ----- |
 | | |
 turns head to the front touches middle finger with right index,
 looks down, brings holding it backwards; at 'tudo' starts moving
 right hand close to left hand. head to the left.

1-47 VB: <<p>-e o seu pai [senta-se,>]
 and your father sits down
 | ----- |
 |
 LV looks at VB, parts her hands and inspires

1-48 LV: [-o `meu `pAI=ali `sen`ta ↓`dI::`nho,]
 my father there sitting
 | ----- | | ----- |
 | | |
 turns head to the front; leans trunk raises right arm, elbow supported by
 backwards and moves arms apart to left hand; left arm on the lap; leans
 both sides, hands with palms down head slightly forwards (pantomime:
 imitating her father)

Listing units: topics and gestures

On line 38, speaker LV takes the turn with the lexical item *não*, a linguistic signal with the functions of closing her preceding turn and opening a new turn, attracting the hearers' attention to what is going to be said. Afterwards, she summarizes what VB has just said, and, at the same time, expresses her agreement with the last speaker and announces the topic for the next turn. In this segment of interaction, two sequences of listing activities can be found. In the first one, (between lines 1-39—1-41), LV raises her head slightly, although always looking down and, with the right thumb (other fingers closed), she

- a) touches and holds back/down her little finger at *almoços*, and then lets it go (line 1-39);
- b) touches and holds back/down her ring finger at *jantares*, and then lets it go after *casa* (line 1-39);
- c) touches and holds back/down her middle finger at *desde*, then lets it go and looks at the hearer after *casas* (line 1-40);

- d) touches and holds back/down her index finger at *desde*, turns her head to the front, looks up, lowers her hands, always holding the index finger down; she then lets go of it at *muito* (line 1-42);

Act d) is the beginning of a listing act on the index finger. However, the speaker could not remember more items to list. Her gaze orientation upwards and the lowering of the hands (a normal reaction during a hesitation) reveal a moment of increasing cognitive effort, when the speaker is trying to remember other items to list. The strategy to overcome this obstacle in speech production consists in summarizing the content of all these listing acts together in a single one: *fazem mesmo muito mais* (they really do much more). The prosodic features of this unit – typical of an emphatic speech style – focus on act 1-42, the solution for this problem, drawing the hearers' attention to it and, consequently, distracting them from the incomplete preceding listing act. Afterwards she goes on enumerating further activities by women in general. To introduce this sequence she makes opening gestures, raising first the right and then the left hand, with palms up, focusing on the verbalized act: *elas vêm de trabalhar* (line 1-43). This act (line 1-43) is composed of a false start. To go on speaking, and again distracting hearers from this moment and drawing their attention to what is going to be said next, she makes another gesture with focusing/opening properties: she moves her arm slightly apart and gesticulates with one hand marking the noun phrase: *a minha mãe* (my mother). In this case, these elements function as the repair element of the repairable *elas* form (Schegloff et al. 1977). After having overcome this difficult moment, she puts her hands on her lap in a resting position, and goes on verbalizing the elements needed to contextualize a narration. The actions in the narration begin at 7 p.m., when her mother comes home from work. At this point, to announce the many things her mother does, which she is preparing to enumerate, she makes a new listing gesture. This time, however, she does not use her thumb but her right index as listing finger. Her right index:

- e) touches and holds back/down the ring finger at *fazer* and lets go of it after *jantar* (line 1-44);
- f) touches and holds back/down the middle finger at *jantar* and lets go of it after *tudo* (line 1-45).

We can see that the left hand finger is held down with the right index during the whole verbalization of the sequences: *fazer o jantar* (make dinner), [*fazer o jantar arrumar tudo*] ([prepare] dinner, tidy everything). We may ask if the fact that she started listing on the ring finger has a logical explanation. In my opinion, the speaker perceives the preceding syntactic cluster – *ela chega a casa* – as a first countable topic, though she fails to accompany it with a listing gesture. The use of the ring finger to accompany the verbalization of the next topic/cluster – *tem que*

fazer o jantar — shows that this is already the second topic in a list and functions as a repair mechanism.

Comparing these two groups of listing sequences, we notice, first of all, a formal difference regarding the listing finger. It is interesting to note that the very same person uses different listing fingers within the span of only a few seconds of speech, so that we could say that she does differentiate between the use of one or the other finger. The only variation in significance could be that, in the second case, she is more assertive than in the first case, when she was still starting her turn. We may conclude that the use of the index finger shows more determination than the use of the thumb with the rest of the hand closed. Secondly we see that, in the first case, the listing gesture — consisting of finger touch and holding back — coincides with syntax: these sequences correspond to phrases:

almoços / jantares em casa // - desde arrumar as casas // - desde ...

On the contrary, the elements corresponding to the touch and maintain pressure do not coincide exactly with the syntactic units:

fazer o jantar // - jantar arrumar tudo

In f) touch was anticipated: it coincides not with the word *arrumar*, maintaining a parallelism with the preceding sequence, but with the word *jantar*, which belongs to the preceding phrase *fazer o jantar*. To investigate these irregularities, which are so typical of orality, it is important to examine the prosodic features of these listing acts and the way rhythm is created. Thus, synchronization between the moment of touch, the moment of prosodic prominence and the relevant lexical elements of the utterance will be the focus of the next section.

Listing units: prosody, topics and gestures

Figure 1 is a graphic representation of the acoustic signal corresponding to the segment of speech analyzed in the previous section. The black dashes correspond to the intonational units. The second dash is prosodically the first listing unit — it ends with an ascending-descending pitch. In this single unit we can find two touches — marked with the white short dashes; in other words, two listing gestures. The same happens with the second intonational unit. The gestures accompany the lexical elements *almoços* and *jantares* respectively in the first unit, and *desde* and *desde* in the second unit.

The spotted dash marks acts 1-42 and 1-43, and the overcoming of the hesitation in 1-41, which introduces a new listing activity. We can see that the pitch variations are different from the preceding intonational unit. In the next listing activity, which prosodically begins at 1-44, there is no listing gesture. In the second intonational unit, we find a listing gesture accompanying the lexical elements *fazer o jantar* and, in the next unit, another gesture accompanying *arrumar tudo*. At

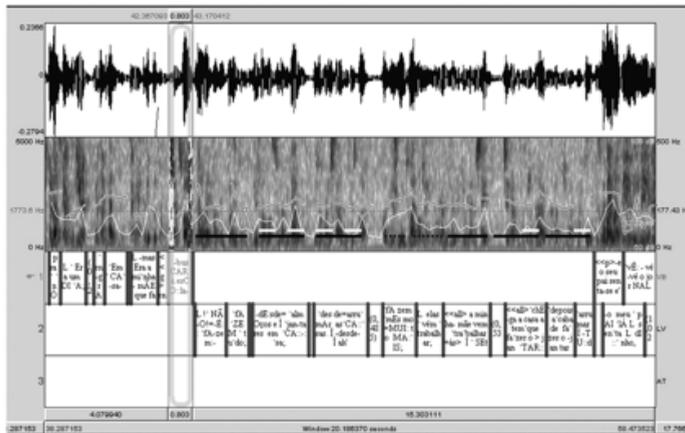


FIGURE 1: Representation of the acoustic signal (1-38-1-48).

this point we could ask whether the listing gesture is more linked to prosody or to the topics expressed by words. It seems that, in this case, the modalities gesture and prosody are responsible for establishing a kind of hierarchical structure: the largest unit is structured by prosody, whereas the smaller units within this larger unit, which correspond to two topics, are accompanied by gestures. The morphological features of the listing gestures confirm what was said in Section [3]. in relation to the sequential use of the listable fingers. As for the trajectory of movements, their reduced amplitude could be attributed to both personality, gender and context but could also be determined by cultural habits. Only a quantitative research of this phenomenon could provide reliable data on the individual and cultural features of the listing gestures. Nevertheless, some more easily observable aspects can be anticipated, i.e., the fingers used to list, the preferred order of the fingers and the kind of information allocated to the fingers.

[4.2] *Case Two: German native speakers*

Three German students, a man and two women, talk about adoption. The speaker in this segment of interaction humorously narrates a recent event involving a child, which illustrates his position regarding the theme.

Prosodic transcription

2-01 FH ich Habe dann ein Nachm-

I have (spent) the afternoon-

|-----|

sitting leaning backwards, hands on the lap, palms on the belly, head turned to the front. turns head to the left, and raises left arm up and to the front, hand with palm up, thumb stretched out

2-02 ich war den ganzen nach`mittag `IM `CAso` `lare`JA.
 I was the whole afternoon at casolare right
 |-----| |-----|
 | |
 continues the movement to the left, simultaneously going up and down with the arm. keeps hand configuration and position, makes some head nods, a stronger and circular head movement accompanying 'ja'.

[]
 2-03 ST kinder
 children

2-04 FH ich musste auf `dieses`MON`ster `von `DA`vid ja auf`pAssen'
 I had to (look after) this monster of david right look after
 |-----| | |-----|
 | | |
 draws his arm back, maintaining a 90° angle, maintains hand configuration; at monster looks, turns head and looks to the left turns head and looks again to the front; closes hand, thumb upwards touches thumb with right index and holds it backwards; keeps it so

2-05 (--)
 |___|
 |
 Looks to the left to ST and again to the front; maintains finger pressured.

[]
 2-06 AF ((laughter))

2-07 FH `dAnn will ER `immer `SPIE::`len ja'
 then he wants always to play, right
 |-----| |-----|
 | |
 Lets go of thumb and raises right hand slightly, head shaking head leaning backwards and eyes closed. touches left thumb with right index again, continues shaking head with the same head position.

[]
 2-08 ST ((laughter))

[]
 2-09 AF ((laughter))

2-10 FH -und er `will KAR`ten `wErfen;
 and he wants to throw the cards
 |-----|
 |
 keeping left hand configuration (hand closed, thumb upwards) and posture (head and trunk leaning backwards) makes a gesture with right hand depicting the act of throwing forwards. Afterwards prepares the following gesture: lowers right hand, touches relaxed the index finger of the left hand.

[]
 2-11 ST ((laughter))

[]
 2-12 AF ((laughter))

2-13 FH -und dann will er wieder 'GELD?
 and then he wants money again

|-----|
 |

raises the right hand slightly, moves left hand upwards, thumb and index finger stretched out, and touches left index with right index. Makes a kind of head shake.

[]
 2-14 ST ((laughter))

2-15 FH `dann will er `SÜ`ssig`KEITen gehAbt=`Haben;
 then he wants to have sweets

|-----|
 |

raises hand looks to his hand and touches again the left index with the right index making a head shake; at süssigkeiten he leans head backwards, turned to the left, holding finger down.

[]
 2-16 ST ((laughter))

2-17 FH -ECHT `die schnauze voll von kindern.
 Really fed up with children

|-----| |-----| |-----|
 | | |

moves head to the front, leaning backwards, eyes closed; raises right arm, hand with palms downwards.

moves open hand with palms downwards from the left to the right against his neck.

lowers hand, shaking head looking at ST and raises trunk

[]
 2-18 ST ((laughter)) von kindern

[]
 2-19 AF ((laughter))

2-20 FH ((laughter)) -ECHT `die schnauze voll `JA?.

|-----| |-----|
 | |

sits with erect trunk, looking at the hearers, right hand and arm still raised at chest level

moves hand again a little higher to the neck. at 'ja' he leans again backwards and continues laughing.

[]
 2-21 ST ((laughter))

Listing units: topics and gestures

On line 2-04, at the same time as the speaker says the word *david*, he touches his left thumb with his right index and holds his thumb back while waiting for the hearers' reactions (their laughter). He lets go of his thumb only at the beginning of the next act (2-07). The next touch coincides with the verbalization of the lexical item *spielen*.

Against all expectations, he then uses his thumb a second time (and not the index finger) to count on.

On line 2-10, the next intonational unit, an expected listing gesture is replaced by an iconic gesture depicting David's enervating activity of throwing cards around. It seems that this depicting performance is more important than the simple listing gesture, which indicates only another important item of the list. The speaker was clearly more interested in showing his hearers how utterly irritating David was. Nevertheless, as will be shown later, there are other cues that enable the hearers to recognize this act as yet another listing act.

On line 2-13, the following intonational unit/listing act, the speaker makes another listing gesture; this time he touches his left index finger with his right index while simultaneously shaking his head. This head movement not only reinforces the idea conveyed by the utterance, but also reveals the speaker's attitude of rejection/disapproval in relation to the content of the utterance. The moment of touch coincides with the verbalization of the lexical item *geld*.

The next listing unit (2-15) is accompanied by a touch on the same finger, happening at the same time as the verbalization of the lexical element *süssigkeiten*. Here, the speaker leans his head backwards and to the left, looking at ST and monitoring her reaction, while holding his index finger down.

Afterwards, on 2-17, he utters the conclusion of his arguments (lines 2-02–2-15), expressing his feelings on the topic of adoption: he is fed up with children (2-17 and 2-20). Both utterances are accompanied by an emblematic gesture, precisely conveying the meaning of 'being fed up with something' (*die Nase/Schnauze voll haben*).

To sum up, the listing gestures follow a different sequence than the ones described in the first example. As was to be expected of a German native speaker, the listing activity starts with the thumb and goes on with the index finger, middle finger, ring finger and little finger. In the present case, the gestures accompany

- a) the verbalization of *david* and *spielen*, located on the thumb;
- b) the verbalization of *geld* and *süssigkeiten*, located on the index finger.

In the first example, on [4.1] (lines 1-38–1-41), we can identify two touches in one intonational unit; in this case we find two intonational units, two touches, but two subsequent allocations on the same finger. The listing activity is not long

enough to be able to yield a logical reason for such distribution, but what matters is the regularity observed as well as the interruption of this regularity in order to make another type of gesture capable of transmitting the speaker's emotions and intentions in a more convincing way: he wants to justify why he is not interested in having children by resorting to the efficient example of David.

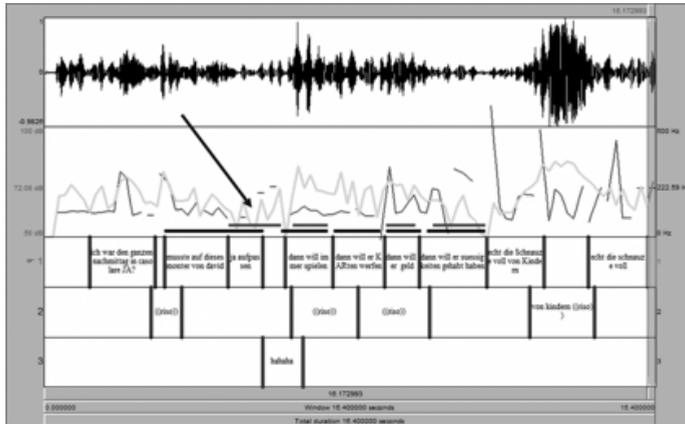


FIGURE 2: Representation of the acoustic signal (2-01–2-21).

Listing units: prosody, topics and gestures

From the representation of the acoustic signal in Figure 2, we can see that the intonational units have different lengths, so that a prosodic rhythmic pattern cannot be detected. In spite of this, the listing activity is recognized as such. In fact, there are other cues besides prosody and gestures, namely syntax. There is a clear parallelism in sentence construction: the identical lexical elements *und dann will er* are used to introduce most of the listing units (2-07, 2-10, 2-13, 2-15). Thus, it is safe to assume that speakers have so many codification means/tools to choose from when contextualizing a listing list that, even if one of them is not used, there are others that will support the organization and identification of items in a list. In this case, the morpho-syntactic means play the main role in the organization of the listing list; gestures and prosody, although taking on their normal form and function in the listing activity, are used irregularly and do not create a rhythmic pattern, a typical indicator for making a list. One interesting aspect is the first touch and holding down of the thumb, which continues after the end of the utterance, during the silent pause between the acts. How should this listing unit be segmented? Should it correspond only to the verbalized utterance, or go on also during the silent pause? In my opinion, it could be described as being composed of a speech-gesture compound, where gesture lasts longer than speech, in frozen position.

[4.3] *Case Three: Angolan Portuguese speakers*

This example was taken from an interaction between three Angolan students talking about their experiences during their first contact with the Portuguese culture. The speaker talks about some historical and socio-cultural facts he had never heard about in Angola and that he learned in Portugal.

Prosodic transcription

- 3-01 DS -fiquei a saber -qu'existia o -VASco ´da ´GA:ma'
 I learned that there was Vasco da Gama
 |-----| |-----|
 | |
 preparation phase of gesture with right hand index touches and holds down little finger of the left hand, raising hands to the chest and lowering them again to the waist, turning thumb upwards
- 3-02 (XXX) jogar ´BASquete'
 play basket
 |-----| |-----|
 | |
 lowers right hand and moves it to the right, stretching index finger upwards; touches left little finger with right index and raises hands; lowers and moves hands apart at 'banquete', smiling and looking at hearers.
- 3-03 -fiquEI=a a sabEr -qu'existIA=A (nA::::me)'
 I learned that there was (name)
 |-----| |-----| |-----| |-----|
 | | | |
 raises and stretches out right arm, pointing with the index at hearer on the right. raises left arm to chest height and touches ring finger with right index holds ring finger down and raises hand almost to the chest moves right hand apart, stretches right arm out and points at on on the right; slowly lowers left hand, returns to rest position.
- 3-04 <<a> ↑`de ´resto não `sabia nada ´dEste ´mun `do; (--)
 besides that I did not know anything about this world
 |-----| |-----|
 | |
 beats four times with palm of one hand against back of the other hand, making trajectories of considerable amplitude. one identical beat and back to rest position
- 3-05 GF [ai é?
 really?
- 3-06 DS ↑`yah'
 yes
 |-----|
 |
 hand at rest position, always looking at the hearers

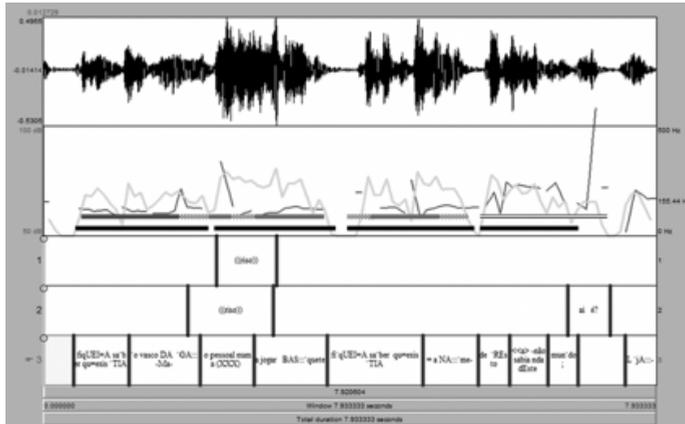


FIGURE 3: Representation of the acoustic signal (3-01–3-08).

Listing units: prosody, topics and gestures

The end intonational contour of the three units (3-01, 3-02 and 3-03) is identical and pitch is ascending and slightly descending. Therefore, in the second unit (which does not display a syntactic parallelism with the first unit of the listing activity) prosody and gesture contribute to the creation of a specific rhythm. In the first and the third units there is a redundancy of rhythmic cues, although their synchronization is not regular.

[4.4] *Case Four: Angolan Portuguese speakers*

In this last example, another Angolan student is commenting on how his habits and personality have changed since he moved to Porto. More specifically, he mentions the fact that he was a DJ in Luanda and that he had a huge stereo at home. His friends in Porto cannot imagine that he was DJ back home in Angola.

Prosodic transcription

4-01 GF EU não `era assim'

I was not like this
 |-----|
 |

moves arms to both sides, palms turned upwards,
 turns head to DS and moves arms again to the front,
 to rest position, hands relaxed between his legs.

4-02 DS FA`la=a `Sério `(XXX);

really (XXX)
 |-----|
 |

leaning backwards, head turned to the speaker, arms relaxed, dangling
 on both sides of the chair.

4-03 GF `JU`ro=eu -eu`FUI- DiJEI:::-
 I swear I have been dj
 |-----| |-----| |-----|
 | | |
 turns head to the front raises hands, left hand palm upwards, stretches right index out (preparation) touches left index with right index and holds it down moving both hands down - movement of big amplitude (stroke and post-stroke hold); declines head down, looks down, then moves head to the left, largest amplitude at DJ, lowering hand, head accompanying this movement

4-04 eu fui -di `JEI:::
 I was a dj
 |-----|
 |
 repetition of gesture - touches the same finger - and head movement

4-05 `em minh`A casa- `tenho
 at home I have
 |-----| |-----|
 | |
 raises right hand, index finger stretched out to chest height (preparation), turns head to the left touches and holds ring finger down

4-06 `tinha `TEnho
 I had I have
 |-----|
 |
 moves both hands to the right, turning head to the left and looking down.

4-07 -um aparelho GRAN:::`de `pa CARAMba
 a sound system (stereo) damned big
 |-----| |-----|
 | |
 turns head to the front; opens wide arms to both sides, depicting size. brings hands together in front of the chest, maintaining elbows raised, at shoulder height

Listing units: topics and gestures

On line 4-01, the speaker displays an attitude of resignation which can be paraphrased as *I can't help it, I don't know how to explain this, but it is like this*. The means used to express this attitude are an opening gesture, hands and arms to both sides, overlapping the territory of his interaction partners, palms turned to the front; to capture his partners' reaction or to address them more directly, he also turns his head and looks at the partner to his left side, raising his eyebrows. The hearer reacts to the confession addressed to him (line 4-02). Afterwards the speaker turns his head to the front, looks down, and raises his hands. At this point, his hand configuration announces a listing activity (left palm upwards, right index stretched out) and the hearers understand that the speaker is about to make a list of a few countable items. This moment coincides with the verbalization of the

lexical items *eu fui* (line 4-03). The next listing act or intonational unit is a repetition of the first listing unit, a means of overcoming a delay in the organization of discourse/ideas. Repeating the first listing act, the speaker gains some more time to structure the next utterance and to find the best way to present further ideas according to his intentions. The performance of this act (4-04) involves the listing gesture on the little finger once again as well as a head movement from the left to the right, which accompanies the gesture trajectory. This strategy, known as repair (Schegloff et al. 1977), consists in a repetition of both gesture and words. The next act/intonational unit (line 4-05) is nonverbally accompanied by a gesture similar to the preceding unit. The first part of the act — *em minha casa* — corresponds to the preparation phase of the gesture; the second part — *tenho* — is accompanied by the gesture of touching and holding down the ring finger. There is also a head movement (first to the left and then to the right) accompanying the gesture trajectory. On line 4-06 there is a second and third repair: the first lexical element — *tinha* — replaces the preceding verbal element — *tenho*. The speaker seems to suddenly realize or remember that what he's talking about actually belongs to a past period of his life, and so he shifts from the present to the past form of the verb. The next correction, the replacement of *tinha* by *tenho* (shift from past to present tense), shows that he is now admitting that his house still exists and his sound system is still there. The second repair is achieved only through verbal means (and not through gestures and/or prosody). The speaker now abandons the listing gestures and begins another gesture unit: he raises his arms and opens them to both sides during the verbalization of *aparelho*, giving additional information about the *aparelho*. The formal features of the gesture convey the meaning of big size, huge. Thus, this gesture anticipates the verbalization of the lexical elements with the same meaning *grande pa caramba*. This anticipation is a strategy of reinforcement and focalization on the lexical element *aparelho*. Similarly to what was described in example [4.2], the speaker's emotional involvement in the content of his utterance and the need to reinforce and depict certain details in a more realistic way (attracting the hearers' attention and drawing them into the narration) leads to the performance of other gestures apart from the simple discourse structuring and more objective listing gestures.

A closer look at the movements of other body parts shows that the arms, the trunk and the head move in synchrony, as if the whole body were following the same rhythm or 'choreography'. Each movement to the left with one part of the body involves movements of other body parts accordingly. As in the preceding case (example [4.3]) the listing gestures are of a considerable amplitude: the listing index, stretched out upwards, draws a trajectory from a point at shoulder height to the waist, touching the countable finger in the middle of this trajectory and holding it and the hand down until the end of the trajectory.

- (v) The most obvious differences in the listing gestures are:
 - (a) the finger that starts and ends the listing activity;
 - (b) the trajectory and amplitude of the movement.
- (vi) There are idiosyncratic variations within not only the same culture (case study), but also the same person, e.g., hand configuration of the listable hand and the listing finger used (both the index and the thumb) (example from section [4.1]);
- (vii) The synchronization between all these different cues is not always perfect: sometimes morphosyntax and gestures are not synchronized.
- (viii) One intonational listing unit can encompass two syntactic units and two listing gestures.
- (ix) Listing gestures sometimes last longer than verbalization (verbal turns/acts), as illustrated by the fact that a countable finger is held down for a longer period of time than it takes to utter the lexical elements.
- (x) Gestures can be used to emphasize speakers' emotions and involvement in the listing activity (e.g., grasping and holding the countable fingers down, or raising and lowering the hands while holding the countable fingers).
- (xi) If the speaker feels the need to give more realism to an aspect of the narration, s/he abandons the listing gestures in order to use an iconic gesture, depicting actions or qualities related to the topics being discussed.

The analysis of listing gestures in a more extensive and diversified corpus coupled with the consideration of other variables such as gender, age, social-status, state of mind, and nationality can certainly contribute to a better understanding of this common strategy in spoken language and interaction. More importantly, the focus on this single phenomenon does not imply the non-consideration of other psycholinguistic and ethnographic aspects of body movements and speech. On the contrary, a detailed and rigorous description of listing gestures forces the observer to take into account all the social, psychological and relational aspects that can be detected in a face-to-face interaction.

APPENDIX

[5.1] Case Study 1





[5.2] Case Study 2





[5.3] Case Study 3



[5.4] Case Study 4





REFERENCES

- Auer, Peter & Elisabeth Couper-Kuhlen. 1994. Rhythmus und tempo konversationeller alltagssprache. *Zeitschrift für Literaturwissenschaft und Linguistik* 96. 78–106.
- Boomer, Dieter & Allen T. Dittman. 1962. Hesitation pauses and juncture pauses in speech. *Language and Speech* 5(4). 215–220.
- Ekman, Paul & Wallace Friesen. 1969. The repertoire of nonverbal behavior: categories, origins, usage and coding. *Semiotica* 1(1). 49–98.
- Erickson, Frederick. 1992. They know all the lines: Rhythmic organization and contextualization in a conversational listing routine. In Peter Auer & Aldo Di Luzio (eds.), *The Contextualization of Language*, 365–397. John Benjamins.
- Galhano Rodrigues, Isabel (ed.). 1998. *Os sinais conversacionais de alternância de vez*. Granito Editores e Livrários.
- Galhano Rodrigues, Isabel. 2001. O papel da entoação na alternância de vez. In *Actas do XVI Encontro Nacional da APL*, 447–458.
- Galhano Rodrigues, Isabel (ed.). 2007. *O corpo e a fala. Sinais verbais e não-verbais na interação face a face*. FCG/FACT.
- Galhano Rodrigues, Isabel. 2010. Gesture space and gesture choreography in European Portuguese and African Portuguese interactions: a pilot study of two cases. In Stephan Koop & Ipke Wachsmuth (eds.), *International Gesture Workshop 2009*, 23–33. Springer.
- Goffman, Erving (ed.). 1974. *Frame Analysis. An Essay on the organization of experience*. Harper Colephon Books.
- Goldman-Eisler, Frieda. 1972. Pauses, clauses, sentences. *Language and Speech* 15(2). 103–113.
- Goodwin, Charles (ed.). 1981. *Conversational Organization. Interaction between speakers and hearers*. Academic Press.
- Gumperz, John (ed.). 1982a. *Discourse Strategies*. Cambridge University Press.

- Gumperz, John (ed.). 1982b. *Discourse Strategies*. Cambridge University Press.
- Gumperz, John. 1992. Contextualization revisited. In Peter Auer & Aldo di Luzio (eds.), *The Contextualization of Language*, 39–53. John Benjamins.
- Hall, Edward. 1974. Proxemics. In Shirley Weitz (ed.), *Nonverbal Communication*, 205–229. Oxford University Press.
- Henne, Helmut & Helmut Rehbock (eds.). 1982. *Einführung in die Gesprächsanalyse*. Walter de Gruyter.
- Kendon, Adam. 1980. Gesticulation and Speech: two aspects of the process of utterance. In Mary Ritchie Key (ed.), *The relationship of verbal and nonverbal communication*, 208–227. Mouton.
- Kendon, Adam (ed.). 2004. *Gesture. Visible action as utterance*. Cambridge University Press.
- McClave, Evelyn. 2000. Linguistic functions of head movements in the context of speech. *Journal of Pragmatics* 32. 855–878.
- McClave, Evelyn. 2001. Head movements in Arabic, Bulgarian, Korean and African American English: What's cognitive and what's cultural? In Charles Cavé, Isabelle Guaitella & Serge Santi (eds.), *Oralité et Gestualité. Interactions et comportements multimodaux dans la communication. Actes du colloque ORAGE 2001*, vol. 3960, 560–564.
- McNeill, David (ed.). 1992. *Hand and Mind*. Chicago University Press.
- McNeill, David. 2000. Catchments and context: non-modular factors in speech and gesture production. In David McNeill (ed.), *Language and Gesture*, 312–328. Cambridge University Press.
- Moeschler, Jacques. 1987. Structure, dynamique e complétude conversationnelles. In *L'analyse des interactions verbales. La dame de Caluire: une consultation. Actes du Colloque*, 123–156. Peter Lang.
- Moeschler, Jacques. 1994. Das Genfer Modell der Gesprächsanalyse. In Gerd Fritz & Franz Hundsnurscher (eds.), *Ethnomethodologische Konversationsanalyse*, 69–94. Niemeyer.
- Müller, Cornelia, Alan Cienki, Ellen Fricke, Silva Ladewig, David McNeill & Sedinha Tessendorf (eds.). 2013. *Body-Language-Communication. An International Handbook on Multimodality in Human Interaction*, vol. 1. de Gruyter Mouton.

- Müller, Cornelia, Alan Cienki, Ellen Fricke, Silva Ladewig, David McNeill & Sedinha Tessendorf (eds.). 2014. *Body-Language-Communication. An International Handbook on Multimodality in Human Interaction*, vol. 2. de Gruyter Mouton.
- Roulet, Eddy, Antoine Auchlin, Jacques Moeschler, Christian Rubattel & Marianne Schelling (eds.). 1985. *L'articulation du discours en français contemporain*. Peter Lang.
- Sachs, Harvey, Emanuel Schegloff & Gail Jefferson. 1974. A simplest systematics for the organization of turn-taking for conversation. *Language* 50. 696–735.
- Schegloff, Emanuel, Gail Jefferson & Harvey Sachs. 1977. The preference for self correction in the organization of repair in conversation. *Language* 53. 361–382.
- Selting, Margret. 1988. The role of intonation in the organization of repair and problem handling sequences in conversation. *Journal of Pragmatics* 12. 293–322.
- Selting, Margret, Peter Auer, Brigit Barden, Jörg Bergmann, Elisabeth Couper-Kuhlen, Susanne Günthner, Christoph Meier, Uta Quasthoff, Peter Schlobinski & Susanne Uhmann. 1998. Gesprächsanalytisches Transkriptionssystem (GAT). *Linguistische Berichte* 173. 91–122.
- Selting, Margret & Elisabeth Couper-Kuhlen. 2000. Argumente für die Entwicklung einer interaktionalen Linguistik. *Gesprächsforschung - On-line-Zeitschrift zur verbalen Interaktion* 1. 76–95.
- Sinclair, John & Malcom Coulthard (eds.). 1975. *Towards an Analysis of Discourse. The English used by teachers and pupils*. Oxford University Press.
- Uhmann, Susanne. 1992. Contextualizing Relevance: On some forms and functions of speech rate changes in everyday conversation. In Peter Auer & Aldo di Luzio (eds.), *The Contextualization of Language*, 297–336. John Benjamins.

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