05. Linguistic analysis of impairment data.
05.04. Interactive analysis of impaired speech samples.
05.04. 02. Gestuality and Non-verbal communication

As we know, in situations of linguistic impairment, the speaker tends to overuse paralinguistic and kinetic codes. We reproduce here the chapter on gestural codes as presented in the volume of the PerLA corpus on Broca's aphasia.

* * * *

Speakers with motor aphasia often have limited mobility due to hemiplegia of the left side. Gestuality, therefore, is reduced to movements of the trunk, head and right arm and hand. The most noteworthy point about the hand is the important use of the palm and the back of the hand; as basic body language studies show and as is reflected in natural signed languages, showing the palm of the hand transmits the generic idea of openness, availability, open channel of communication, while showing the reverse transmits the opposite meanings: low receptivity, closure of the communication channel, something which makes us think of the meaning of "turning ones back" to someone or something.

Another transcription challenge has been that of describing in the most faithful way possible the various gestures used by these speakers with aphasia, something which, as we have already said, led us to enrich the transcription system with new marks that try to simplify reading and at the same time increase the information. So, starting from the classic typology of Ekman y Friesen (1969)[1] and the modifications of Cosnier (1987)[2], we have become aware of the existence of various types of gestures, taking into account their basic function as regulatory or illustrative emblems.

Frequently, this basic classification depends on contextual use, and an emblem can be sometimes used as an illustrator. This superposition between the different types of gesture seems to be a general characteristic of speakers with aphasia and can be explained by two basic causes:

La estructura triple básica

De Fernando Poyatos: La comunicación no verbal (1994: 130)

"Al admitir demasiado ciegamente que el lenguaje verbal es el intrumento interactivo más perfecto, se le ha dado un significado demasiado vago o demasiado limitado, pues no se le ha visto como algo integrado en la complejísima red de intercambios somáticos, que ya hemos visto en capítulos anteriores. Se ha creído poder analizar su realidad en un encuentro interactivo vivo incurriendo todavía en lo que ha sido el mayor fallo en el análisis del discurso y de la comunicación interpersonal en general: no ver esa triple e inseparable realidad del lenguaje vivo, hablado, que existe sólo como un continuo verbal-paralingüístico-kinésico, formado por sonidos y silencios y por movimientos y posiciones estáticas, es decir, lo que desde entonces empecé a estudiar como 'la estructura triple básica.'"

- on one hand, verbal impairment almost naturally imposes an emphasis on non-verbal codes.

- on the other hand, the neurological lesion also has praxical consequences that justify the difficulty in fine, detailed motor function.

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[1] Ekman, P. and Friesen, W.V (1969): "The repertoire of Nonverbal Behavior: categories, origins, usage and coding", *Semiotica* 1969/1, pp. 49-98.

[2] Cosnier, Jacques (1987): "Ethologie du dialogue" (Ethnology of dialogue), in J. Cosnier and C. Kerbrat-Orecchioni, Eds: *Décrire la conversation*, Presses Universitaires de Lyon, 291-315.

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The distinction proposed by Helm-Estabrooks (1991: 118)[3] in the sphere of apraxias between distal and proximal gestures seems pertinent in this respect:

> *"There is evidence that gross movements of the shoulder, arm, fingers are regulated by a more proximal motor system, phylogenetically (...) older and that the finer movements of the hand and the fingers are regulated by a more distal motor system, phylogenetically newer. Apraxia, as regards disorder of the representation of learned movements, can more affect the distal movements, phyogenetically more recent than proximal movements, which are phylogenetically older.*

Other distinctions by the same author take into account if the gesture involves some type of utensil (transitive v. intransitive gestures) or if they fall on the body or outside of it (there are speakers for whom there is a notable difference in effect in making one or the other).

Keeping the basically semiotic view of Ekman and Friesen, we describe in the following sections the main codified gestures; as in any system of codification, there is a basic or constitutive movement, which is susceptible to adopting different expressions; for example, what we have called "sweeping", can be performed in different areas of the body space (at chest level, next to the head) and the movement of the hand can be different (more of less long, more horizontal or with a rising trend, etc.); but what allows us to identify the gesture is this repeated movement of the hand as if it were dragging something away. In the majority of these gestures, the simultaneous facial expression is also fundamental.

> *[Suggested additional reading: Charles Goodwin's page on corporeity and gestuality, where some conclusions are drawn from the study of daily interaction with a seriously aphasic speaker].*

The significance of the gaze is also fundamental. The first significant variable is, obviously, if the speaker looks at the conversational partner or avoids this eye contact (generally looking down, but also looking at the wall opposite where there is no one, or any other direction, which in film terms we would call "out of the field"). This avoidance transmits the general idea of a non-cooperative attitude, not participative, but the types of this absence can be very different, depending on the conversational moment in which they arise: sometimes it is a reaction of impotence, of frustration because a certain verbal act has been attempted without success; on other occasions, the insistence of the conversational partners on a certain theme or question is rejected by the diversion of the gaze; other times it is a conversational division in which the other speakers exchange turns without directly involving the person. But the direct and attentive gaze is the most obvious gesture of the willingness to participate in the conversation and to respond to any interpellation; this gaze, in fact, bestows meaning to planning silences as it indicates that the aphasic speaker has taken the turn but has still not uttered any words; therefore we can also consider it to be a regulatory gesture. If this direct gaze appears in the receptive position, accompanied by other gestures (for example emblems of agreement or illustration that directly signal to the speaker the use of the word), this can be a signal of agreement, of ratification.

> *[Suggested additional reading:*
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> *- Rosa Mateu (2001): "El silencio y la comunicación no verbal" (Silence and non-verbal communication) in El lugar del silencio en el proceso de comunicación (The place of silence in the communication process).*

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[3] Helm-Estabrooks, Nancy; Albert, Martin L. (1991): *Manual de terapia de la afasia (Aphasia therapy manual)*, Madrid: Médica Panamericana, 1994.

- D. V. Givens (1998): The non-verbal dictionary of gestures, signs and body language cues]

Emblems (EBM)

For non- verbal communication researchers, an emblem is a gesture that has a conventional (arbitrary or motivated), but stable meaning:

"These are non-verbal acts that have a direct oral transposition or a dictionary definition that consists of one or two words or a phrase. Among the members of a culture or subculture, there is great agreement (...) but nevertheless, some emblems describe actions common to the human species and can transcend a particular culture (...)." (Knapp 1980:17)[4].

The repetition of some of these gestures and therefore the frequent need to introduce a specific description in the test is what drove us to consider possible codification, basically to avoid long repetitions that hinder the reading.

There is one emblem that Spanish speakers with motor aphasia sometimes use to reflect positive appreciation about something or someone; it consists of uniting the index finger and thumb forming a circle and bringing them up to the lips for a short kiss. This is a gesture that we have also found in other PerLA corpus informants. To reflect its emblematic nature, we have codified it as EBM DEL BESO (KISS EBM) to avoid the repeated description of "he kissed the thumb and index finger"; we therefore added a mark that we had not considered in the previous volume of the corpus but that coincides with the intention of the transcription system to be economical.

Other emblematic gesture that frequently appear are those of AFIRMACIÓN (AFFIRMATION) and NEGACIÓN (NEGATION, RISA (LAUGHTER) and SONRISA (SMILE). The EMBLEMA DE PULGAR (THUMB EMBLEM) consists of showing the thumb pointing up and transmits the wish of good luck, or of success, etc.

Emblems have a much more conventional character than other gestures that we see; for example, the EMBLEMA DE CRUZ (CROSS EMBLEM) or the sign of the cross, despite the iconic nature of the cross, has an emblematic value and cultural nature. Cosnier (1987) refers to these gestures as quasi-linguistic as they can be used independently of speech. This possibility of silent usage is what has led us to qualify as emblems other relatively common gestures in our transcriptions of aphasia, such as those we call MOSTRATIVO (AGREEMENT), INTENSIFICADOR (INTENSIFIER), APROXIMATIVO (APPROXIMATION), o BARRIDO (SWEEPING AWAY).

The MOSTRATIVO (SHOWING) emblem can be understood as "claro!" ("of course!"), a verbal expression that also has great functional richness; the expressions "claro↓" and "claro↑" are not the same, for example. This gesture often appears without verbal support, that is, as an emblem; sometimes it serves to cede the inference to the conversational partner (in an argumentative turn for example), to demonstrate that what is said is obvious, to give agreement. The gaze and the palm of the hand play a fundamental role to distinguish these possible interpretations; it can be accompanied by another emblem: ENCOGIMIENTO DE HOMBROS (SHRUGGING OF SHOULDERS).
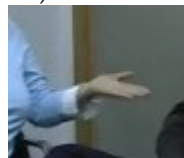
showing illustrator

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[4] Knapp, Mark L. (1980): *La comunicación no verbal. El cuerpo y el entorno (Non-verbal communication. The body and the surroundings)*, Barcelona: Paidós. Translation by M.A. Galmarini.

The following fragment includes in turn 0109 a non-terminated explanation, ostensibly showing the palm to the speaker; this seems to indicate that the meaning can be easily inferred by the conversational partner, who indeed provides a possible collaborative termination of the turn:

0107   I: (COMPÁS) un crucero→
0108   M: se lo has dicho a to'o'l mundo ya
0109   I: sí/ buenoo→/ Amparo↑ (MOSTRATIVO, RISA)
0110   M: ¿Amparo ya lo [sabe?]
0111   I: [buenoo]/ sí/ yy→ a Paqui↑/
[APP2, 0107-0111]

The following fragment also uses the showing emblem to activate the inference in the conversational partner E; the following intervention, by the key conversational partner, makes the argumentative line of this inference explicit ("está muy bien poder encontrar un crucero que salga desde tu misma ciudad"):

0597   I: ¿eh?/ (COMPÁS) y sale de aquí // (MOSTRATIVO) quee→ oye↑
0598   M: sí/ que salen poquitos↑/ de aquí de Valencia↑
[APP2, 0597-0598]

The APROXIMATIVO (APPROXIMATING) emblem can be understood as "more or less", "maybe"; the hand, or sometimes the head, makes a to-and-fro movement from the wrist or the neck; it can be accompanied by some facial expression of disagreement (pursing the lips or frowning).

0116   M: ¿habla bien↑?
0117   I: (APROXIMATIVO) síii/(ÍNDICE A LA BOCA) buenoo // habla bien↑ [¿eeeh?=]
0118   M: [uh um]
             I: = perooo→ s'engancha (SEÑALA AL LOGOPEDA Y SE ENCOGE DE HOMBROS)// yoo→
[ARC2, 0116-0118]

Photograph sequence of the approximating emblem, waving the hand from side to side.

The INTENSIFICADOR (INTENSIFIER) emblem consists of repeated movements of the wrist, leaving the fingers of the hand loose, which move from top to bottom, showing the back of the hand.
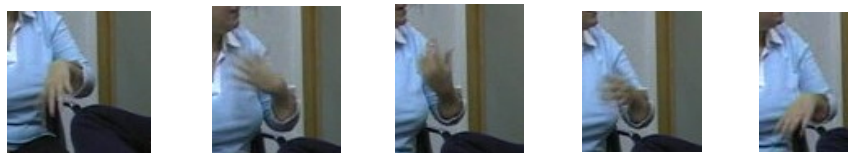
Photograph sequence of the intensifier emblem in APP2, 0803.

The corresponding meaning, which may appear verbalised or not, is "a lot", "greatly":

0063   M: [noo/] te dijeron/ *ha pasa'o↑ esto/ se ha caído↑/ y se hizo un golpe muy fuerte↑// peroo→*

0064   I: pero yaa→// bueno// (MOSTRATIVO) está en– en Laa Fe→/ [¿eeh?=]

0065   M: [uh um]

           I: = quee/ cuan→/ (INTENSIFICADOR) bueno/ buff

0066   M: tardará tiempo (ASENTIMIENTO)

0067   I: va a tardar tiempo/ ¿eh?// peroo→///(2.0) yoo→

[APP2, 0063-0067]

The gesture of BARRIDO (SWEEPING) has a metaphoric value, substantially illustrating; the most appropriate meaning might be "quita, quita!" ("get off!", "move away!"). The essential movement is a displacement of the hand that seems to drag something to one side or behind.

Photograph sequence of the sweeping emblem in APP2, 0054

Despite their possible isolated appearance, some of the emblems that we have just described are frequently used simultaneously with speech; we can say that their emblematic character appears softened, with hints of illustrations. Emblems in this sense can be considered as lexicalised illustrators; so, the common action of raising the hand to the ear when making to understand that someone is speaking on the telephone can later be unlinked from discourse and used simply as a notifier of the type, "nos llamamos por teléfono" ("we called each other on the telephone") or, "me llamas" ("call me"), in a brief or casual greeting situation, for example. It thereby becomes the EMBLEMA DE TELÉFONO (TELEPHONE EMBLEM). In ARC2, 0063, for example, we find an emblematic use of an illustrator; the speaker narrates that when the aphasic conversational partner is not capable of pronouncing the word "gafas" (glasses), he resorts to the gesture ("le hace así" - "he looks like this").

Also, the EMBLEMA DE BARRIDO (SWEEPING EMBLEM), which is generally used with rapid hand movements, sometimes has a more specific use in which the hand rises, stops briefly in the air and the gaze is displaced with a turn of the head (the photograph sequence captures the conversation turn [App2, 0574], in which the speaker refers to a rejected situation).

Illustrators (ILTR)

Illustrators are gestures with a deictic value and accompany speech, and they often contribute meaning with a pro-forma value, depending on the context.

> *"There are a number of non-verbal acts directly related to speech or that accompany it and that serve to illustrate what is being said verbally. They can be movements that accentuate or emphasise a word or a sentence, outline a line of thought, signal objects that are present, describe a spatial relationship or the rhythm of an event, trace a reference frame or represent a corporal action. There can also be emblems that are used to illustrate verbal judgement, often repeated or even substituting a word or a sentence" (Knapp, 1980: 20).*

Some illustrators become sufficient in themselves to be unlinked from verbal support, but without becoming true emblems; as we are seeing, the basic classification of emblems, illustrators and regulators is not so much a typology of gestures *per se* as a classification of their possible functions.

Cosnier (1987: 297) offers an internal classification of the illustrator category that makes reference to the mode of non-verbal codification:

- Deictic: point out the referent, pointing to it with the finger or an inclination of the head, for example.

- Spacio-graphic: schematically outline a spatial structure, e.g., ILTR DE DISTANCIA (MCP1.0220) (DISTANCE ILLUSTRATOR), o ILTR DE ALTURA (MCP1.0230) (HEIGHT ILLUSTRATOR).

- Kine-mimetic: imitate the action of the discourse with global mimicry of the whole body, e.g., ILTR DE ESCRITURA (ARC1.0143, ARC1.0551) (WRITING ILLUSTRATOR), ILTR DE NADAR (APP2.0385) (SWIMMING ILLUSTRATOR), ILTR DE PLANCHAR (APP2.0375) (IRONING ILLUSTRATOR), ILTR DE REPARTO (GIVING OUT ILLUSTRATOR), ETC. In these cases, the gesticulation reproduces the action it intends to evoke.

- Picto-mimetic: draw the referent in space (ARC2.0323).

Deictic illustrators consist of pointing; they can point a real or imaginary object (discursive deixis *am phantasma*), or even to point out the conversational partner; in the following fragment, the speaker requests (as the photograph shows) that their conversational partner helps them complete a numbering:

0609 I: el cinco↑ de ago– no↓/ dee→ a ver/ del cinco/ de SE(P)TIEMBRE// y↑/ el doce/ de se(p)tiembre/ ¿uh um? (iltr distancia)/ º(está→)º (EBM DEL BESO, MOSTRATIVO)// entoncees→ yo qué sé↑/ mira/ eh– es que– es/ no/ he hecho un cruzaro↑/ porque yoo→/ bueno/ eeh→/ Santo Domingoo↑/ dee→ (⇒M, LO SEÑALA)/ [(SONRISA) ¡ay!]

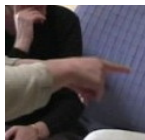turno 0609

0610 M: [Brasil→]
0611 I: Brasil→
[APP2, 0609-0611]

The following deictic illustrator, from ARC1, is made by the key conversational partner H; it points at the aphasic partner, who has just articulated a certain phrase after a number of attempts:

turno 0526

0524 H: ¿qué?/ habla ma– habla despacito
0525 I: má↑ despacio/ má↑ despacio
0526 H: (LO SEÑALA) asíii→/ ¡sí se→!/ ¡sí señor!
0527 I: má↑ despacio
0528 H: ¿ves como así sí que te entiendo?/
[ARC1, 0524-0528]

Among the *spacio-graphic* illustrators we have found some that draw itineraries or represent places (e.g., ILTR DE BAHÍA (BAY ILLUSTRATOR) in ARC2, 0115). The ILTR DE DISTANCIA

(DISTANCE ILLUSTRATOR) is made when the hand marks a displacement or two points of a specific dimension; it can indicate a spatial distance, as in MCP1:

> 220 M: … que la dejara↓ me dijo Amparo↓ sola a coger el autobús↑/(ILTR DE DISTANCIA) o fuera yo el primer día paraa→ enseñarle el sitio donde está→ que fuera ella sola a Requena↑/(ILTR DE DISTANCIA) y volviera↓/
> [MCP1, 0220]

but also a temporal distance, as the following fragment from APP2 shows, referring to a holiday period:

> 0609   I: el cinco↑ de ago– no↓/ dee→ a ver/ del cinco/ de SE(P)TIEMBRE// y↑/ el doce/ de se(p)tiembre/ ¿uh um? (ILTR DISTANCIA)/ ᵒ(está→)ᵒ (EBM DEL BESO, MOSTRATIVO)// entoncees→ yo qué sé↑/ mira/ eh– es que– es/ no/ he hecho un cruzaro↑/ porque yoo→/ bueno/ eeh→/ Santo Domingoo↑/ dee→ (⇒M, LO SEÑALA)/ [(SONRISA) ¡ay!]
> 0610   M: [Brasil→]
> 0611   I: Brasil→
> [APP2, 0609-0611]

The ILUSTRADOR DE ALTURA (HEIGHT ILLUSTRATOR) places the hand horizontally at a certain distance from the ground:

> 0230   M: … ésta no se parece a su primo con el ordenador↑// (2.0) aquél desde que era así (ILTR ALTURA)/ el ordenador
> [MCP1, 0230-0230]

Amoung the *kine-mimetic* illustrators, we find imitations of various actions, such as the following: ILTR DE NADAR (APP2, 0386; MCP1, 0120) (SWIMMING ILLUSTRATOR), ILTR DE PLANCHAR (APP2, 0336) (IRONING ILLUSTRATOR), ILTR DE ESCRITURA (MCP1, 0461) (WRITING ILLUSTRATOR), ILTR DE TELÉFONO (APP2, 0963) (TELEPHONING ILLUSTRATOR), ILTR DE REPARTO (APP2, 0643; MCP1, 0056) (SHARING OUT ILLUSTRATOR), ETC.

Lastly, the *picto-mimetic* illustrators provide examples, such as ILTR DE GAFAS (ARC2, 0063) (GLASSES ILLUSTRATOR), and ILTR DE EMBARAZO (MCP1, 0402) (PREGNANCY ILLUSTRATOR). In this group, we include some gestures of clearly metaphoric value, half-way between the emblem and the illustrator; for example, in MCP1, line 0026 shoes a MOVIMIENTO CIRCULAR CON AMBAS MANOS(CIRCULAR MOVEMENT WITH BOTH HANDS) which clearly transmits the idea of dynamism, starting to move, startup:

> 0026   M: (⇒I) silla de ruedas poco tiempo↓ y paquete quince días o así/ porque en seguida el cerebroo↑// (⇒E) le empezó↑ (MOVIMIENTO CIRCULAR LAS MANOS ᴿ) /// que los médicos↑– el de La Fee→ uno de ellos↑ estuvo aquí dos veces a verla porque se hacía cruces// porque decía que cómo era posible↑ porquee→ las perspectivas eran muy negras///

In line 0040 of the same transcription, the speaker uses both open hands, in repeated movements towards the chest, as if to give it air, which we can consider as a illustrator of a state of anxiety. This same metaphorical character is transmitted by some unequivocal movements with one or both hands. For example, we label a variant of the sweeping emblem that displaces the hand in a single horizontal direction as (MANO⇒)–, and this transmits a certain idea of the definite state of things (APP2, 0664, 0670). The following fragment of APP2 illustrates the extreme usefulness of gestures in aphasic conversation:

0661   M: § ¿cuánto tienes?
0662   I: sí/ a ver– (RGL FRENO) a ver
0663   M: en euros
0664   I: (⇒M) yaa– joder↑// (INTENSIFICADOR) es quee→/ cien euros/ por↑/(ILTR DE
             DISTANCIA)   mes (MOVIMIENTO CIRCULAR CON LA MANO)/ por mes/ por
             mes→/ yy→ chicaa↑/ ¿que hay quee→ meterle tal↑?/ (NEGACIONES RÁPIDAS
             CON LA MANO) ¡uuy↑!// pero→ yo yaa→ vamos↑/ (MANO⇒) es que→ mira↑
             siii→ (⇒M) no↑ nos muere/ (APROXIMATIVO) bueno/ (EBM DE LA CRUZ) noo→
0665   M: (SE INCLINA MUCHO HACIA ELLA) ¿si no qué?
0666   I: (⇒M, ASENTIMIENTO) ¡sí!/ Josee//(MOSTRATIVO) eeh→
0667   M: ¡hombre!/ eso no se piensa
0668   I: (MOSTRATVO) ¡no!
0669   M: (⇒I, SONRISA) *si no pasa nada*
0670   I: (⇒E, MOSTRATIVO) si no pasa nada↑// y tal↑/ vamos→ (NEGACIÓN, MANO⇒,
             COMPÁS DEDOS APIÑADOS) es que me vooy→/(MANO⇒) peroo→// (⇒M)
             bueno↑/ yaa [está→ (ILTR DE PAGAR)]
0671   M: [ahora] seguro que te vas→/// está todo ya contratado
[APP2, 0661-0671]

Regulators (RGL)

Regulators are meta-conversational, serving to manage the system of turn taking:

> "*verbal acts that maintain and regulate the entire process of speaking and listening between two or more interacting subjects. They indicate the speaker to continue, repeat, go into details, hurry up, make their discourse more pleasant, concede the speaking turn to the partner, and so on.*" *(Knapp 1980: 21).*

This function explains why De Gaulmyn (1987) considers signs of attention or continuators that make up the secondary system of turn taking as para-verbal regulators. In the non-verbal sphere, the MIRADA (GAZE) is fundamentally important as a regular *par excellence*; the fixed and attentive gaze , the CEJAS ARQUEADAS (ARCHED EYEBROWS) are non-verbal elements that take on these types of value.

A gestural regulator often repeated by these speakers consists of marking the rhythm of their utterances with repeated movements of the arm extended and the hand closed; it is an accompanying gesture that marks syllable production, occurring very frequently in the second and fourth transcriptions (ARC2, APP2); given its facilitating nature for speech, which also serves to indicate the partner in the speaking position, we consider it to be a regulator (RGL DE COMPÁS) (BEAT REGULATOR). To simplify reading and avoid long descriptions of the type, "rising movement of the arm", or, "he repeats the gesture of affirmation with the fist closed and the arm extended", we have included the symbols ⇔, ⇓ and ⇑ in these transcriptions, with which we try to give an account of the movement made; as always, the superscript R means a repetition of the same gesture: for example, (MANO⇓R).

In the APP2 transcription the beat regulator appears constantly as a speech accompaniment, facilitating the utterance; compared to other speakers of the PerLA corpus where drumming of the fingers on the table appears (see photograph sequence belonging to recording 21, MTV) or the simple vertical movement of the arm (recordings 10,11 and 23, ARC), in this speaker the pointing with the index finger appears as the most common form (see photograph sequence below), almost always with the gaze fixed on the listener; this can be interpreted as a more specific use of the regulator as it serves to warn the partner that she is articulating the sentence and therefore must not be interrupted.
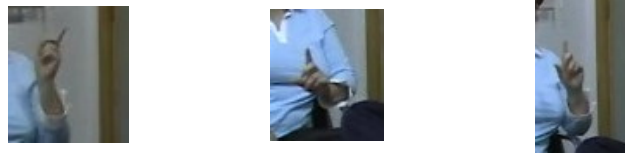
Beat regulators with the extended index finger in APP2

There is another modality of REGULADOR DE COMPÁS (BEAT REGULATOR) that does not accompany successful utterances, but incomplete utterances; for example, this gesture appears during the whole of intervention 80:

0080   I   entonces/ yaa→/ vamos↑/ yoo→/ yaa→/ a

Compared to the previous cases in which the articulation is successful and is effective, in this situation the speaker articulates some word but appears to leave the rest of the information to the deduction of the listener; her movements show the hand open, but do not show the palm to the conversational partner (as in the EBM MOSTRATIVO (SHOWING EMBLEM) that cedes inference), but towards herself:
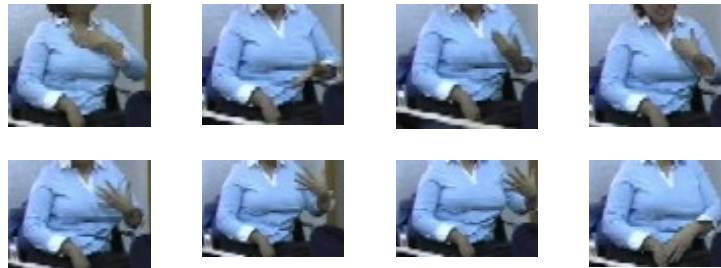
Photograph sequence of beat regulator with the open hand in APP2-0800:
"entonces/ yaa→/ vamos↑/ yoo→/ yaa→/ a"

At other times (MCP1) the beat regulator seems to be made by the movement of the whole trunk.

 Another important regulator, shared with non aphasic conversation, is the one we call RGL DE FRENO (BRAKE REGULATOR), which can be understood as, "wait, do not interrupt me". Similarly to the showing emblem, the palm is shown to the conversational partner but the hand is orientated with the fingers pointing upwards, not downwards.

The use of the REGULADOR DE COMPÁS (BEAT REGULATOR), as well as being the major resource of the secondary system of turn taking (continuators), implies the *emphasis of discursive supports* which, in the strictly verbal, locutive, sphere is materialised in what we have called *draft speech utterances or acts* (Gallardo 2005a, 2005b)[5]. These are utterances that the speaker pronounces as trials or early attempts, until they succeed in saying the expression that they were pursuing (they may not succeed); if it is a recorded discourse, it would be possible to select the really intentional fragments and separate them from the draft acts, which would be relegated to a disposable level, like the bad takes that are eliminated in the task of film editing and production:

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[5] Gallardo Paúls, Beatriz (2005a): Afasia y conversación (Aphasia and conversation). Las habilidades comunicativas del interlocutor-clave (Communicative skills of the key-speaker), Valencia: Tirant lo Blanch.
Gallardo Paúls, Beatriz (2005b): "Más allá de las palabras y su estructura: las categorías del componente pragmático" (Further than words and their structure: the categories of the pragmatic component), in E. Garayzábal (Ed.): Lingüística clínica y logopedia, Madrid: Antonio Machado.

0041   I1:   sí/ es que/ ellaa→// bueno↑// es que/ yo era↑ pequeña/ (ILTR DE ALTURA) y yoo→ bueno↑// (COMPÁS) mi tía Amparito↑ eeh– ¡uy!/ entoncees↑/ miraa/ mi abuela↑/ ¿eh?/ (NEGACIÓN^R Y GESTO DE DESAGRADO) quee→ no↓ no↓ no↓ ¿eh?/ y mi tía Amparitoo↑/ bueno// eraa↑/(MOSTRATIVO) ¡aay!// y yo/ *¡chicaa*↑*!/* *¡pero– peroo chica*↑*!* *que–* (DEDO A LA SIEN) *que yoo*→// (2.0, MOSTRATIVO) eem– es que↑ me dice// *oye* ↑*// yo no te decía nadaa* ↑ *porque*→ (NEGACIÓN^R) y yo↑ mi tía Amparito/ mira↑/ (APROXIMATIVO) **y yaa→ es tá** medioo→ /// (2.0, LADEA LA CABEZA^R) nch– umm– **un po qui too/ paa chu chitaa**// (SONRISA) PEROO→ ¿eeh?/ entonces↑ me dieron↓ la sorpresa↑/ de que↓ fuese↓ allíi// y ella comió↑// oyee→ estabaa↑ buenoo (BARRIDO) //yo qué sé↑/ y es quee→ eraan↑ tantas↑ emocionees→// (ASENTIMIENTO^R) ¿eh? quee→

[MCP2+APP1, 0041]

In the three cases (demand for continuators, regulatory gestures of beat, draft acts), we find an increase of certain elements of discursive support that occur simultaneously with language but which, in non aphasic conversation the speakers often silence or minimise; the draft acts form part of what is sometimes called covert articulation (Fiez y Raichle 1997)[6] or internal speech circuit (Hernández-Muela, Mulas y Mattos, 2005:59)[7].

This need of a secondary support for expression also appears in some activities at the early stages of language acquisition[8], when children need to count on their fingers simultaneously with verbalisation, read aloud before learning to reading silently or resorts to a rhythmic tone to memorise long series (e.g. tapping and rhythm to memorise multiplication tables or religious prayers). Using the language of Vigotsky, we would say that all these formal manifestations are characterised by having external form and internal function, just as the Russian author proposed for egocentric language.

This formal (material) need for meaningful activity refers us back to the inseparability of signified and signifier as identified by Benveniste and which, together with double articulation, constitutes the essence of the linguistic sign. We see that when the usual signifier support (the phonological component) is insufficient due to motor limitations, the speaker is impelled to exploit other possible means of expression (signifiers), such as musical rhythm or gestuality.

We see that the analysis of non-verbal communicative activity in non-fluent aphasia presents the emphasising of certain pragmatic elements for management of turn taking: some of verbal nature (draft acts and continuators) and other of body language (especially the beat regulators, but also emblems and illustrators such as substitutes/accompaniments of the word). This increase is consistent with the initial hypothesis of enhancement of pragmatic categories as compensation strategies for grammatical impairment.

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[6] Fiez, Julie A.; Raichle, Marcus. E. (1997): "Linguistic Processing", in J. D. Schmahmann (ed.): *The cerebellum and cognition*, San Diego Academic Press, 233-254.

[7] Hernández-Muela, Sara; Mulas, Fernando; Mattos, L. (2005): "Contribución del cerebelo a los procesos cognitivos" (Contribution of the cerebellum in cognitive processes), *Revista de Neurología* 40 (Supl1), 57-64.

[8] This need for secondary support is illustrated by the following exchange between a 5 year old boy and his mother, in which the boy is surprised that the mother can read without speaking:

Boy: Look, mama!

Mother: Ander, don't interrupt me now, I'm reading.

Boy: How can you be reading if you're quiet!

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Gesture Recognition in Patients with Aphasia

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This study focuses on the controversial issue of the integrity of gestural communication abilities in subjects with aphasia. To define the ability of subjects to interpret symbolic gestures, an *Amer-Ind Recognition Test* (ART) was developed which required no verbal response from the examiner or the subject. The relationships between impairment of Amer-Ind signal recognition and (a) severity of aphasia, (b) listening and talking abilities and (c) the type of response picture used were investigated. Whether subjects more often chose related foils than unrelated foils in a forced-choice format was also examined. Two training tests and the ART are described. Results from administration to 15 aphasic subjects indicated that: (a) all subjects performed equally well, regardless of their aphasia severity classification; (b) action picture recognition was related to listening ability; (c) action pictures were easier to identify than object pictures; and (d) on error responses, subjects overwhelmingly chose related over unrelated foils. The possibility that gestural abilities were relatively well preserved among the subjects tested, in the presence of a wide range of listening and talking deficits, is also discussed.

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