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Frente/trás (front/back):space and its verbalization (the Portuguese case)

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Abstract

We will try to prove that in European Portuguese, the spatial configuration in relation to the axis *front/back* can be described according to several models, each one based upon a mental scheme, in a certain way, always linked to the central original or prototypical model.

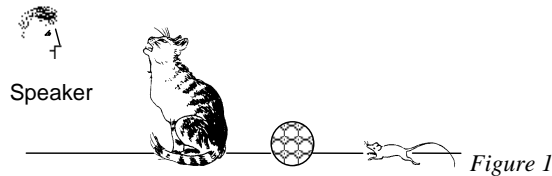
Stating that *front/back* is based upon a group of features, such as direction of gaze, direction of movement, direction of nutrition, etc., without suggesting their necessary appearance as a whole, (as pointed out by Vandeloise 1986:108) amounts to not saying much. We are left with the impression that an undetermined number of features exists, forming an essentially undefined group and that those features are uniformly allocated in the various spatial configurations of frontality. Our proposal for analysis contends that those features cannot be all considered in a group, but that some of them make up part of a group, whereas others integrate different models. Each one of these models is based upon only one or on very few features, the several submodels can focus opposed perspectives of spatial configurations, in this way permitting, for the same situation, verbalizations that can either contain the positive sense (*frente*) or the negative sense (*trás*) in the same axis of frontality.

Keywords: Language and cognition, Portuguese spatial configuration, *front/back*, mental models.

1. Misunderstandings and apparent paradoxes

Each one of us, Portuguese people, has certainly experienced equivocal situations in which spatial references can be antithetically interpreted. As an example, take the following chart (figure 1) in which the perspective of the speaker is taken (SPEAKER)

- (1) *O gato está à minha frente. (The cat is in front of me)*
- (2) *Eu estou à frente do gato. (I'm in front of the cat)*
- (3) *A bola está atrás do gato. (The ball is behind the cat)*



- (4) *A bola está à frente do gato.* (The ball is in front of the cat)
 (5) *O rato está à frente da bola.* (The mouse is in front of the ball)
 (6) *O rato está atrás da bola.* (The mouse is behind the ball)

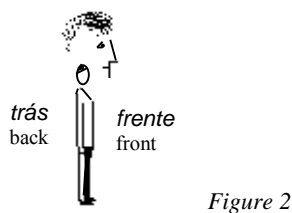
A situation such as this not only proves the impossibility of univocally representing the axis of frontality, but also the possibility of opposing configurations, such as the verbalizations here provided (among the many possible ones) appear to show. This, clearly, shows the complexity of mental models that may be involved in the configurations related to the axis front / back (*frente/trás*).

From our standpoint, the models with which E(uropean) P(ortuguese) verbalizes the spatializations of the frontality axis (front / back) can be pictured in 4 models that we can name as static and one to be known as dynamical model.

2. Static Models

2.1. The Original Model

The first one, certainly the most “primitive”, is the most prototypical and considered by everybody as being at the origin of the general configuration of the axis of frontality. Let’s call it, therefore, Original Model. It is the model which opposes front/ back basing itself on the bodily constitution of the human being, such as presented in figure 2:



This model, through a process of projection, can be applied to any animate or inanimate reality, attributing an anthropomorphization that can be total (sculpture, a great deal of animals) or partial (a chair, a TV set).

This is the underlying model to phrases 1) and 2).

The notion front / back in all the languages of the world will necessarily have to be related to the physical reality of the human being. It is not strange, therefore, that very different language families show great coincidences in the selection of body parts that serve as referential marks for the constitution of the axis *frente/trás* (front / back).¹

Portuguese and other languages derived from Latin (without considering other non-Latin languages such as English *in front of*) adopt as the structuring frame of this axis forms derived from *frons*, *frontis*. Despite the fact that this word in Latin could also make reference to *face*, *forehead*, the most prototypical sense, the main one was *forehead*, as we can see remembering that *fronto*, *onis* meant “that one whose forehead is large” and *frontem contrahere* meant “to knit one’s brow”.

In relation to the opposite vector, “(a)trás” (back) the back is the most common referential frame.

Now, if almost all languages make of face / breast the referential element of front, what elements of that body region are cognitively marking for the constitution of the notion *frente* (*front*)?

The question seems to be of so obvious an answer that, at first glance, appears of little or no pertinence. The most frequently found answer, and the one which seems to take care of that “evidence” is the one that shows the glance as the configurator of “frente”: “devant: indique une position, à partir d'une référence où serait supposé se trouver le regard du sujet parlant, *orientée vers l'avant* dans le prolongement de ce regard. [...] derrière: indique une position à partir d'une référence où serait supposé se trouver le regard du sujet parlant, mais *orientée dans le sens opposé à l'axe du regard*.” (Charaudeau 1992:430-431)

Definitions such as this, which only take into account one of the intervening elements in each of the cognitive processes, may lead to the conclusion that the mentioned processes and the linguistic conceptualizations that decode them are simple and universal univocal realities. Well, it is not quite so.

Definitions such as Charaudeau’s seem to forget a detail that may be taken as trifle but certainly is not: the direction of glance and all the facial organs can change at any moment without affecting the axis *front / back*. If it were not like this, syntagms like “look sideways” or “look back” would be completely “unintelligible”!

Since glance direction is mutable, other elements must intervene: other sensorial organs and the natural positions of repose and movement.

In this manner according to Cifuentes Honrubia, citing Fillmore: “Para un animal el «frente» es la parte o cara que tiene el mayor número de órganos de percepción, y que llega primero cuando se pone en marcha según su movimiento característico.” (Cifuentes Honrubia 1989:60)

Here organs and “position” and “movement position” are already combined. However, we consider that it is obvious that “frente” (front) corresponds to the majority of organs. The “quality” of those organs of perception is a factor to be taken into account. Here too, some organs have more value than others. Vision, for instance, cannot be considered as an organ equal to other organs. If an animal had

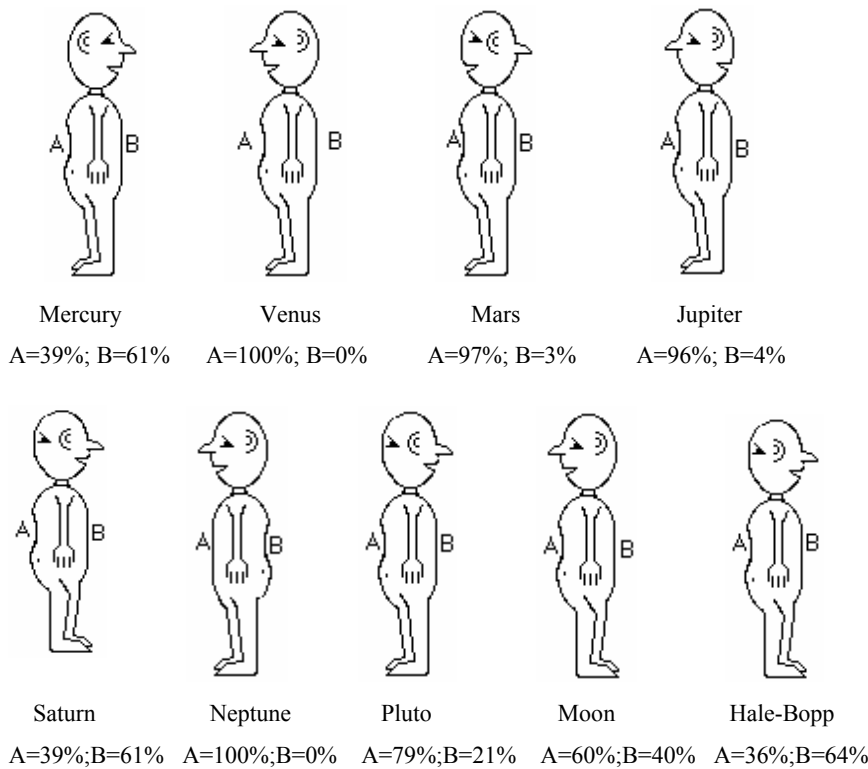
1. Svorou, 1999:249-251

its ears turned backwards (many do) and a hole at the base of the skull through which it could sense smell, as long as it had the eyes and mouth in its normal position, it wouldn't be many doubts as to where to point out its "frente" (front). In such a case it would have one sense (two) turned to the front (the mouth represent sensorial organ?) and two sensorial organs turned backwards (trás).

In effect, the mouth is also fundamental determining ("frente"). All animals learn to recognize the localization of the mouth of their predators or enemies as a means of defense and survival. The position of the mouth is very important to "con-front" the other.

In order to verify the degree of importance or relative weight assumed by the various constitutive elements of the original model of frontality, we carried out the following inquiry. With a group of approximately 100 university students, we asked them to imagine an alien (ET!) shown in a picture. Each figure represented a being more or less similar to the human prototype in which the relations among the anthromorphical elements were to be considered as basis for the attribution of *front* to the human being. The relationships between each one of these parts diverged from figure to figure. The students had to point out only with a letter (A or B) what part seemed to be the front of that alien.

The results must be read according to the following manner: for instance; if for the figure representing the inhabitant Mercury the result shown is A 39% and B 61% that means that 39% of the inquired considered that the front of the figure was the part signaled with A and 61% considered that the front of the same figure was pointed out with B.



Some conclusions, gathered from the answers are clear:

- 1) It is evident that the notion of *front* is not univocal among speakers;
- 2) The notion of *front* becomes more shared between speakers when the more similar the object (inanimate or animate) to the human prototype.
- 3) Contrary to what a theory of sufficient and necessary conditions could state there is nothing that could make up a semic nucleus composed of necessary features in order to establish *the front(a frente) of X*.

Thus, considered individually one by one, there is no necessary element in the attribution, even majority, of *frente*. One part can be the front

- without eyes (for Saturn, for 66% of the queried)
- without ears (for Jupiter, for 96% of the queried)
- without mouth (for Jupiter, 96% of the queried)
- without feet in their proper orientation (in Mercury, for 61% of the queried)
- being the relation belly/back not the proper (Neptune, for 100% the queried)

The fact that the notion of *front* does not necessarily have some of these elements, some of them may be missing (but not all of them, obviously) does not imply that all have the same weight. Out of the results obtained we can conclude that in the configuration *front* the several intervening parts don't share the same importance. We will examine some results in order to prove this point.

Thus, it seems that ears are not taken into account, since there are two figures exactly the same in everything but the ears (Saturn and Hale-Bopp) the speakers not only diverged in their choice of *front*, as it is, curiously, the figure that had "straight" ears had two points less.

The relation chest/back does not appear to be primordial importance either for determining the poles of frontality. In Neptune, the back was positioned at the *front* by the totality of the queried. We can also attest that by the other figures that for the speakers that what language does (to identify back/behind and bodily backs) doesn't imply that these will determine what is *frente* (front) and what is *atrás* (back).

The position of the nose appears, on the other hand, to have more importance. In the imaginary inhabitants of Mars only the orientation of the nose and ears (taken as eyes?) it took some speakers (3%) to assign *front* to that part.

In Pluto, the junction of mouth, nose and ears, was enough for 21% of the queried to consider that that was enough to indicate the front of that figure. Besides of corroborating what we mentioned about the relative importance of the nose it already points into the direction of a certain weight of the mouth as a configurating organ of the *front*. We can see that in Jupiter, where the mouth is in opposition to all the other facial organs and also in opposition to the feet, for 4% of the queried **only** the mouth was enough to attribute to that part the notion of *front*.

But, without doubt, the most important features for the demarcation of *front* in the human being are the eyes and... feet.

It is fully understandable the importance attributed to vision. When we look at somebody, towards the corresponding *front* we look at the eyes. This procedure is inscribed at the very deep level of our genetic code, it is not therefore something culturally acquired. Animals themselves share with us this instinctive behavior that considers the eyes the central point through which we confront the other. And this fact is so important, even for the survival of the species, that some animals develop false “eyes” at their backs (spots that imitate eyes) so that they can trick predators and in this way avoid being attacked even when turning their backs on them.

What may have caused some strangeness is the fact that the queried showed that for the attribution of *front* feet were of extraordinary importance. Evidently, and contrarily to the previous situations, what is determining is not the place where the feet are but the direction towards which feet are turned. Unconsciously, the inquired associated the two realities: the direction of the feet implies a direction of the movement. Nothing indicated this: let’s look at the figure of the “inhabitant” of the Moon who happens to be identical in everything to the human being except in the direction towards which the feet are turned. It could well happen that he could walk in the direction of the eyes, nose, mouth and chest and not in the opposing direction at which the feet are already pointing. Nothing was mentioned to the inquired about this. However, I consider legitimate to conclude that all unquestionably associated these two realities (direction of the feet and movement) and therefore the results obtained.

Let’s consider that the direction towards which feet are pointed was almost always chosen towards the front. Only in two cases that did not occur: In Mercury, where the direction of the feet and chest opposed all other facial organs, and in the Moon, where the direction of the feet opposed all other elements (facial organs and chest). Even in this way, in these two cases, 40% of the speakers inquired found that the direction of the feet was sufficient to justify the feature *frente* (*front*). And in Saturn, the feet, together with ears, the nose and mouth, won over the other part, constituted by the eyes and the chest, 66% to 34%.

This proves the fundamental importance that the notion of movement has in order to establish the opposition *frente/trás* (*front/back*), even when that proof is the result of the indirect clues: the direction of the feet.

Summing up: the first model of frontality is prototypically given by the usual orientation of the human figure: *frente* (*front*) it is attributed, in canonical position, to where the feet, the eyes, the mouth, the nose and the chest are turned.

2.2. The Mirror Model (Model of Mirror Situational Orientation)

Some other model, which we can name “Model of Mirror Situational Orientation” originates from the first: when an object without intrinsic orientation acquires a situational orientation due to a process of mirroring of an object intrinsically oriented.

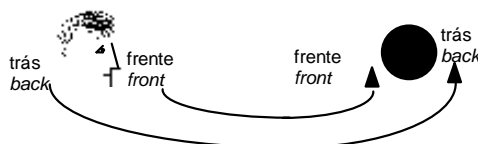


Figure 3

It is this model that justifies phrase 5).

The simplicity of this model solves the problems related to the configuration of objects, which due to their physical indifferentiation, lack the possibility of being attributed the features *frente/trás* (*front* and *back*). A ball, a rock, a tree can become configurating because they acquire situationally a particular orientation.

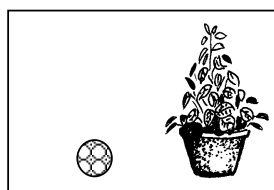


Figure 4

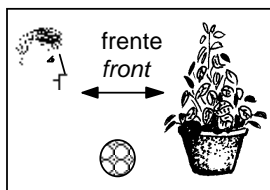


Figure 5

(7) *A bola está à frente do vaso. (*The ball is in front of the vase.)

(8) A bola está à frente do vaso. (The ball is in front of the vase.)

Besides this situational orientation, this model is responsible for the attribution of intrinsic orientations to objects that figuratively are not anthropomorphized: *the front* of a dressing cabinet, of an electrical appliance is attributed generally from the relation of confrontment (facing) that it may have with the human being.

2.3. The model of visibility

The opposition *front / back*, beyond the purely locative configuration, presupposes a determined set of varieties, secondary in principle, that may acquire a determining importance in certain varieties of mental models of frontality. Therefore in this case the aspects [visibility] and [accessibility] that the axis in question usually requires. Because *front* implies, prototypically, [visibility] and [accessibility] varies the acceptability in the following situations:

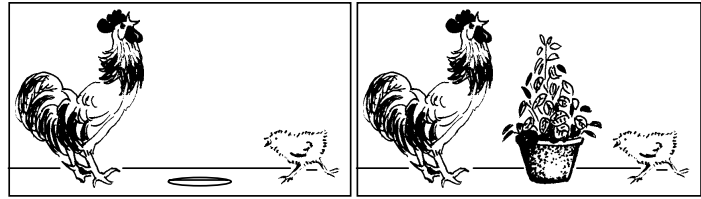


Figure 6

- (9) *O pintainho está à frente do galo.* (The chick is in front of the cock.)
- (10) *?O pintainho está à frente do galo* (?The chick is in front of the cock.)

Let's imagine that instead of a vase we had a wall (or a curtain) that didn't allow any visibility and separated the two fowl. We could not definitely state that one was *em frente* (in front) of the other.

It will be necessary, therefore, to admit a structuring model of the axis *front / back* that we may call **model of visibility** since it is based upon the presence or absence of the feature [visibility] / [accessibility]. In diagram:

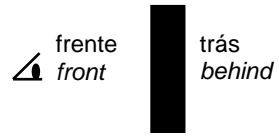
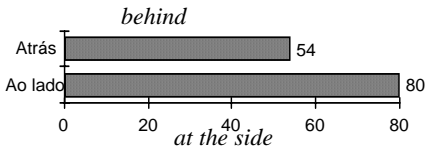
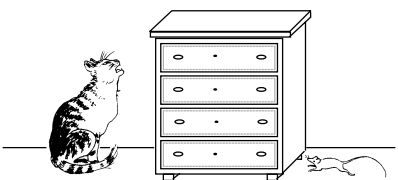


Figure 7

This is the model that supports, for instance, phrase 6). In certain circumstances, it may well be the model that imposes itself, to the point of attaining other areas of placement/localization beyond frontality. This is what happens when, for instance, it cancels out any intrinsic orientation that the configurating object has imposing its own spatial structuration of the axis of frontality.

In order to confirm the power of this model let's have a look at the result of the following test, carried out inquiring 134 people:

Complete the phrase that describes the figure:



O rato escondeu-se do gato _____ do móvel.
 (The mouse hid from the cat _____ the furniture)

Figure 8

This proves that [non visibility] can be enough to cancel out the usual axis of frontality (in this case for 40% of the inquired). In fact, furniture is an object intrinsically oriented, having a *front* and a *back*: that which coincides with the part that usually interacts (interfaces) with human users, pull the

drawers, and *back* the opposing part, generally inaccessible and against the wall. This, naturally, implies that if we have the axis *front/back* we also necessarily have the axis laterality *left/right*.

Thus, in this intrinsic perspective, the cat is at the right of the furniture and the mouse at the left. If we abandon the intrinsic perspective of the furniture and adopt one that has the observer/reader as configuring reference, the cat is on the left and the mouse on the right.

However, almost half of the speakers inquired eliminated both the perspective related to *in front of the furniture*, and the usually called deitic that takes the observer as Configurator. A great part of these speakers (40%) opted for changing the usual vectors of frontality/laterality.

We have, in this manner, to different axis of frontality in the same object: one that usually has and constitutes its intrinsic orientation; the other which is imposed by a model that cancels out the former axis:

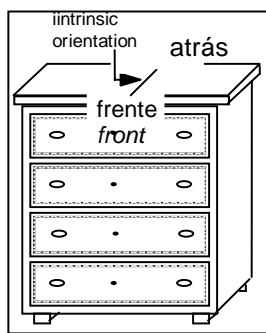


Figure 9

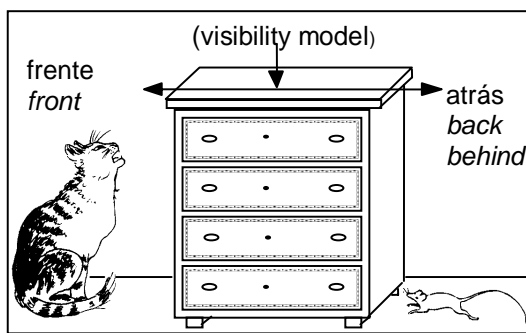


Figure 10

These results show how important the concept of “occultation” is (or “inaccessibility”), within the antinomy visibility / non-visibility for the establishment of the opposition *front / back*. Such concept is so bounding that, as we can see, can impose the variety *atrás* (back) that presupposes and cancels out other special orientations even when intrinsic.

The relation that this model has with the original model is evident: it is a relation of functionality. In the original model, the *back* part also implies [non-visibility]/[non-accessibility] and the *front* one the opposite.

Compatibility and complementarity that this model of visibility has with the model of situational orientation in mirror or symmetry may lead us to confound them or to hint that both of them may be summarized into one. It may seem, at first glance, that this model is the same as the previous model, but with just one observer or focalizer.

This cannot be interpreted in this manner, since both models are based on different ingredients. What structures the model of situational orientation in symmetry is the mirror like attribution of an intrinsic orientation, everything occurring between the two basic elements of a spatial configuration: the Figure and the Configuring. In this other model, that of visibility, we can also talk, in a certain way, of an intrinsic orientation that the non-oriented element can gain. But that orientation does not

work in mirrored symmetry. It is always attributed the facet *atrás* (*back*) in whatever the objects mirror oriented.

In truth, in this model of visibility there is not attribution of a situational orientation. Further: in the case that the Configuring-object has an intrinsic orientation such is ignored, being *front* the opposing part to the part that hides the figure. The cat-furniture-mouse test proves this. The mouse can only be behind (*atrás*) the furniture if we conceive the *front* of the furniture as the opposing side to the one where the mouse is, forgetting the intrinsic *frente* (*front*) that the furniture itself has.

The mental modelization that this model presupposes is particularly interesting for our analysis, it evidences how inside frontality there are cognitive models based and structured in differentiated perspectives. Observe that this model is the one that permits to verbalize the following situation:

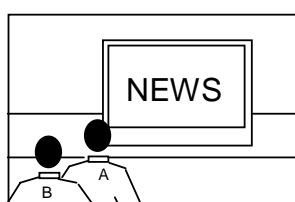


Figure 11

(11) A- *Estou à (na) tua frente?* (*Am I in front of you?*)

B - *Não. Não estás à (na) minha frente.* (*No. You are not in my front.*)

According to the original model, {A} is unquestionably *in front of* / *à frente de* {B}. According to the model of movement (See next, *The Dynamical Model*) it is also unquestionably that {A} is *na frente* / *à frente de* {B}. However, without falling into linguistic absurdity, in this models perspective, {B} can very well say that {A} is not *na frente* (in front) of his!

But the greatest difference of this model in relation to all the others we here propose, is that it requires not just only two elements for the configuration but three: to the Figure (Fg) and Configurator (Cfg), we need to join the element in relation to which the whole model configures itself. To this element, intervening in the situation and which is not the Figure and may not coincide with the Configurator we will call the focalizer. Thus, the diagram complements the previous one.

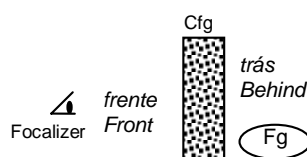


Figure 12

The fact of existing one focalizer does not mean that the model only works when this element exerts its visual prerogative, that is, when the focalizer “observes”. On the contrary, prototypically, in

this model, the focalizer does not exert its faculty of visualization that the mouse (Fg) is behind the furniture (Cfg) because its supposed that the cat (focalizer) is not seeing it.

The prove that this model is mostly a derived submodel based on the variety [(non)visibility] is the fact that it does not cover in the same form the two vectors of frontality. That is, it “specializes” itself only in the vector of retrospectivity (*a-/por/de-+trás*), not serving in the same acceptability the opposing or complementary vector (*frente*):

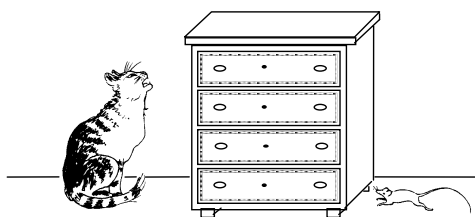


Figure 13

(12) *O rato está (escondido) atrás do móvel. (The mouse is hidden behind the furniture.)*

(13) **?O gato está à frente do móvel. (*?The cat is in the front of the furniture.)*

As we have also mentioned, for this model (non)visibility can be substituted for the equivalent direct (non) accessibility. Consequently, the focalizer can also, in non prototypical cases, lack the faculty of visualization, possessing, as counterpart, the one of power of accessibility. We can always imagine a smart mouse that can hide behind anything in order to escape from a blind cat, but with smell.

In any way, both the Figure, and the focalizer can possess the features [+animate] and [+intrinsic orientation], being this latter one prototypically [+animate] and intrinsically oriented. It may happen, however, being [-animate] and intrinsically non oriented. In this case, it is [+accessibility] that substitutes [+visibility] and the directionality of glance is substituted by the directionality of a movement. This implies that in these cases the substituting element of the focalizer is always provided with movement (real or intentional), which confers itself a certain orientation:

(14) *The placed ourselves behind (atrás) a dune to escape from the northerly wind.*

(15) *The missile did not hit the airplane because this hid itself behind (atrás) a mountain*

(16) *So that we could protect ourselves from the waves, we swam behind (atrás) the rocks.*

Even when in this model the movement can carry out substitutively the role of focalizer, it can not, however, globally be understood as a dynamic model. In truth, the intervening elements in the configuration, Figures and Configurators, are considered statically, without compulsory movement. The existing movement only substitutes directionality of the visualization of the focalizer, not having to be present in the spatial relations between the Figure and the Configurator.

Above all, what proves this is that this model continues to translate the spatial relations Figure-Configurator and not the temporal relations, as it usually happens when movement is introduced.

2.4. The Facing Model

Some other model to be proposed can be named the Facing Model. It prototypically requires two human “objects” facing each other, being one of these objects made up of several elements. Typical example: speaker / audience

In diagram:



In this model, *atrás (back)* is not visually opposed to *frente (front)*. Whoever is *back* can well be visible, at least for the figurant in relation to which the configuration is structured. For this reason, for the same situation, apparently antithetical phrases seem possible:

- (17) *The teacher saw that back there (lá atrás) (=back rows) a couple were kissing.*
 (18) *The teacher saw that in the classroom, in front of himself (à sua frente) (=before his own eyes, not hiding), a couple was kissing.*

Unquestionably, in a certain way, this model contradicts the prototypical model. In reality, in the original model *front* and *back* adscribe themselves in opposing directional senses, but in this the two elements of the positive couple seem to include themselves in the same sense.

The possible paradoxes of this model result from the fact that it does not structure itself from just one intrinsically oriented object, but because of necessarily possessing, beyond the Figure, two “pre”-Configurators that originate a zone of configuration or action (that will eventually work as Configurator).

Let’s see what entity that serves as Configurator in this model. In the case of a classroom (one of the most prototypical examples) what does determine the relation *front/ back*?

The first answer to pop up is that this relation is only the usual: *à frente (front)* designates the act of “facing” the teacher, that is, whoever is face to face with him (first row); a pupil, a row of pupils, will be behind because will be facing the backs of others, who, obviously, are in the front.

Well, things are not so simple. The process is substantially different. Let's have a look at the following "map" of a hypothetical classroom.

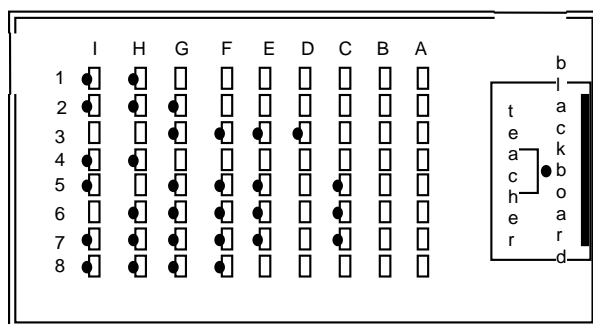


Figure 15

If the configuration *front/back* were structured, also here, only by the original model (a *frente do professor*= front of the teacher) , would be "*à frente*" (at the front) of a pupil that would have nobody before him. This does not happen: There are two students in row H (H1 and H4) who do not happen to have anybody in front of them and cannot be placed, in the classroom in the front (*à frente*). That is why it is not acceptable:

(19)**In row H there are pupils who are at the front (à frente) and others at the back (atrás).*

That is why all students in rows H and I would always be placed at the *back* even when in rows A,B,C,D,E,F,G nobody would be sitting there.

In the same order of ideas, the row at the front is not the first to have pupils. Hence it is not acceptable

(20) **Row, C is the row at the front (da frente).*

Since the "front" row is always the one closer to the area that serves as Configurating place, whether it has people in it or not. Precisely, because of this it is acceptable.

(21) *Row A it is the front row (fila da frente) but it is empty.*

As we can see, it is not the people present (in this case pupils) that serve as reference to attribute the two facets of frontality *back / front* to the classroom. Will it be then the person presiding, taken as "agglutinating center" that projects its frontality to the classroom? It happens that the, *front* row always coincides with the *front* of the teacher.

It is not necessary, however, a very deep analysis to verify that it is not the human figure –in this case the teacher- who projects the totality of his intrinsic orientation over the classroom. Therefore it suffices to consider the acceptability of

(22) *The picture is on the front wall (pareda da frente), behind (atrás) the teacher.*

We can immediately see that the *back* of the teacher does not coincide with *back* of the classroom but, rather, with the opposite. On the other hand, the axis *front* of the teacher does not only include the first rows, but the totality: in canonical position, all the rows and all the students are *in front* of the teacher, even the rows further to the *back*.

We will have to conclude, compulsorily, that besides the frontality of the possible human Configurator “teacher”, there is other intrinsic frontality the room itself and which has as its own structuring point, if we can say so, not one Figurant, but a area of action which determines *front*:

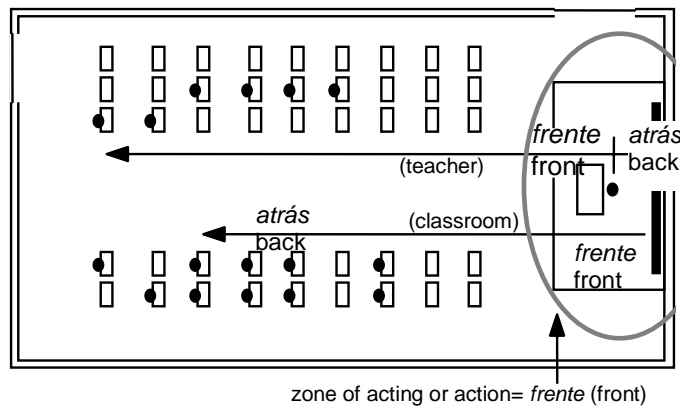
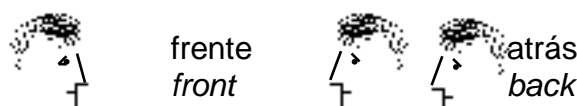


Figure 16

Thus, this model implies that there is always, presentially or virtually two prototypically human elements: one placed in the zone of action and others that are placed before that zone of action. An the word *before(diante)* is the key to this model, since it implies that the canonical position is compulsorily a position face-to-face between the element belonging to the zone of action and the other elements ordered in a relation *front/back* relatively to that same zone of action. From this the proposed representation (figure 14, shown before) for the scheme that translate this model:



It is this same model that informs the configurative relations à *frent /atrás* in all human (or animal) groupings in which there is an order in relation to a zone of action, as the scheme tries to show. It can

either be a classroom, a crowd of people gathered in front of or around a speaker or simply a line of people waiting for hot cookies.

We can thus, see that in this model the opposition *front / back* is structured upon the opposition *proximity / further* from the zone of action. Precisely because of this, this model of frontality is “contradictory” to some extent with the other models (that of movement, for instance), in which a greater distance can correspond to the zone “closest to the front”.

The fact that the configuring element of the *front* of this model cannot be a point belonging to a straight line, but rather a zone, it takes frontality not to be compulsorily to just one direction, as in all other models, but it may well be multidirectional (a bull ring may be an example in point).

We have just said that prototypically in this model, the zone of action (that may be equivalent to Configurator) is established from the facing of two human elements, being plural one of them. However, the model also works with other non human and non animated elements, provided that they can be configured in a situation of facing. It is exactly this fact that allows that this situation (figure 17) can be translated by the phrases:

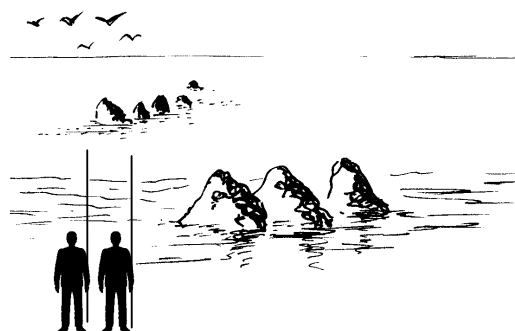


Figure 17

(23) *Nestes rochedos cá da frente há pouco peixe. Nos que ficam lá bem atrás é que há muito.*
(In these rocks up front there (cá da frente) is little fish. In the ones back there (lá atrás), there is a lot.)

(24) *Há muito peixe naqueles rochedos lá atrás.* (There is a lot of fish in the rocks back there (lá atrás).)

(25) *Há muito peixe nos últimos rochedos, lá bem atrás.* (There is a lot of fish in the rocks, well in the back (lá bem atrás).)

Note that this same situation could be worded exactly in opposite way.

(26) *Nestes rochedos cá de trás há pouco peixe. Nos que ficam lá bem à frente é que há muito.* (In these rocks back here there is little fish. In the ones up front there (lá bem à frente) is a lot.)

(27) *Há muito peixe naqueles rochedos lá à frente. (There is a lot of fish in those rocks over there at the front (lá à frente).*

(28) *Há muito peixe nos últimos rochedos, lá bem à frente. (There is a lot of fish in the last rocks, well in the front (lá bem à frente).*

This is possible because there can be two models into play. Phrases 26)-28) are based upon the model of movement (see next The Dynamical Model) since they consider the distance to be covered between the fishermen and the rocks. The previous ones can only be understood from the facing model, which takes the sea as an oriented object and facing one person facing it on the beach. The beach, concretely the place where the waves break into the sand, is, in this manner, the place of action, making possible in this way, that the waves at the *front* to be the closest to the beach and the ones at the *back* to be the ones that are farther from them.

The applicability of this model to situations such as the one just analyzed helps us to better understand the way of working of the model itself. In a prototypical situation such as the one of the classroom, the first “obvious” justification to spring up is that one row of chairs / pupils is *atrás* (back) of others because it is at their backs. This is a correct argument, but it doesn’t correctly explain the situation, since there are other elements involved that contribute to construct a localizing model that depends upon several factors and not just one. Now the, in the beach situation there no “backs”, and the same model does not work. This proves, in the first place, that there is not just one configuring element (the backs of pupils in the prototypical model), but one model of configuration resulting from several elements. In the second place, we can see that the Configuring element in the model is the *zone of action* from which all the elements are configured, independently from the respective relative facing positions: one pupil can be sitting sideways or backing the classroom that does not run against *à frente* or *atrás*; whatever the orientation of the two fishermen on the beach may end up being, the six phrases (23)-28)) subtitled figure 17 are still valid.

2.5. The Dynamic Model

A fifth model that can describe the configurations of frontality is the one based upon movement. Apparently, it is the one, which in its working, is less linked to the previous models. In truth, for this model the position of the Speaker or any other observer is irrelevant. The only structuring vector is the one of the movement of the object(s), provided that that movement is just in one direction or sense. The figure 18 presents a typical situation: wherever the observer is placed, the cat *is* (always) *à frente* (in front) of the ball and this *à frente* of the cat:

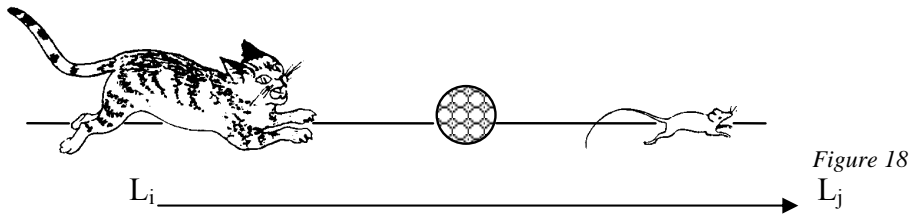


Figure 18

The beginning of *trás* coincides with L_i , that is, the initial place of movement, and *frente* with the most advanced point (the last carried out, L_j). As it is easy to see, and given the fact that the model only depends on the vector $[L_i \rightarrow L_j]$, the point of view of any Speaker or observer does not alter the configurations established by the model. Multiple observers can be present, or being one, change position but the relation *trás* / *frente* remains the same. The structuring movement of this model doesn't have to be necessarily physical; it can well be equally notional or intentional, the model behaves in the same manner.

This model which can be called **model of movement** is, in a certain way, inverse to the previous one, as we can see in the following comparative chart:

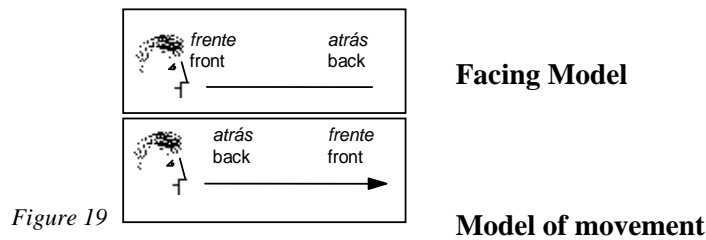


Figure 19

In the facing model, the area closest to the object that works as Configurator, better, of the object placed in the area of action, corresponded to *frente* and the space farthest to it corresponded to *atrás*. In this last model the contrary happens: the space closest to the place where the Configurator / Observer is (considering this the initial point of the process) corresponds to *atrás* and the space farthest from it corresponds to *frente*.

It seems to be obvious that we must conclude that these two models have little or nothing to do with each other, since they end up configuring space in an antithetical way. However, this last model is nothing but the original model expanded by a projection. And it is movement which provokes that projection.

As the typical movement of the human being is carried in the direction of his front, if we conceptualize the space of that movement as a whole, in that space the coordinates that configure that (prototypically) human being who covers it are projected. That is: the space covered and the human being covering it are configured in the same way. Simply and efficiently. And instead of a contradictory model in relation to the original, we have, at the bottom, the same original model in

some other perspective: now assimilating the space of movement. Figure 20 synthetizes, schematically the process:

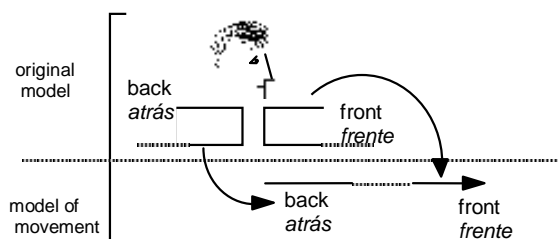


Figure 20

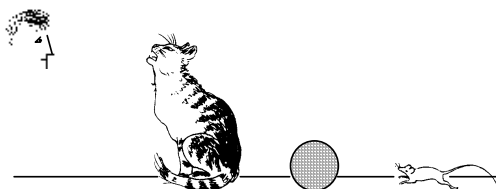
3. Semantic Implications of the Structuration of the Models of Frontality.

Having reached this point, it would be interesting to be able to answer to the question: in the configuration *frent/trás* is there only one model that can develop into others, rearranging themselves in accordance to the wanted configurations for different situations or are there several models even different?

At this moment we have to point out a fact: whatever defines *frente* does not vary very much. It can be systematized into three items: 1) Frontal contiguity (in the Original Model, in the Mirror Model and in Facing Model); 2) Visibility (in the model designed in this manner); 3) More advanced point of Movement (in the Model of Movement)

We can deduce, therefore, that there is a certain stability amongst the several models, in the sense that there are no nuclear ruptures, being each one of them a result of the focalization of a determined aspect of the prototypical original model, based on the frontal contiguity of the face.

On the other hand, and this is also unquestionable, the focalization of one or other aspect of the original model means that the same spatial configuration may be presented in a determined form or in an inverse form: let's remember that in the situation taken as example, it was possible (for the Speaker) to state (figure 21):



(5) *O rato está à frente da bola.* (The mouse is in front of the ball.)

(6) *O rato está atrás da bola.* (The mouse is behind the ball.)

It is unquestionable that if these two configurations can be accepted as portraying the same real situation, it is so because they recur to different perspectives or models.

We think that because of all of these reasons, if it is possible to talk of a certain unity in the several models in which the vector of frontality *frente/trás* is structured, it won't be less licit to understand this unity not in the sense of S(ufficient) and N(ecessary) C(onditions) theories, but rather in an organization type of the ones based upon similarities in family groups: that is, opposite features can exist between the several models and simultaneously shared features in virtue of a common origin.

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This seems to be the case. It will be appropriate to speak of several "brother models", begotten by a common father or mother. Rather than trying to reduce all the presented models into one, it seems to us more rational to understand them as semantically and pragmatically as divergent, different but simultaneously related.

The models that we presented try to prove that the variety of possibilities that they possess does not cancel out the existence of a common cognitive trunk. Anyway, we think that it is proper to globally speak of two big branches: the static models (Original, in Mirror Orientation, Visibility and Facing) and the Dynamic one (the Model of Movement). In this latter model, with the introduction of the time factor, other configurative implications are necessarily introduced.²

The relationship that exists between these (sub)models is not only diachronic. For language, as a communicative-cognitive system, whatever is diachronic, was, but no longer is –it does not exist anymore. And in synchronically functional language (using one phrase that we think still possesses validity) these models have intuitively recognized relationships. The "independence" between the above mentioned models has to be seen as "dependent independence" from the features that make up the prototypical model.

The most global conclusion (for us this is what is really important) to be drawn, offers a perspective in different shapes the way in which the markers of the vector of frontality, in a similar manner to other spatial configurators, are usually faced. To each one of them is attributed a "meaning" with nuclear with and compulsory semanteme (for the theory of S(ufficient) and N(ecessary) C(onditions)) or made up of a body of features organized as "family similarities". But whatever the case, each configurating spatial element is seen as having **one** meaning that can vary according to the so called contexts.

². Teixeira 2001, chap. 7.

The analysis presented and we think that it is more in accordance with reality proves that the same vector of spatiality, in this case, the one of frontality, can be configured from several modes, each one based upon a mental model always linked, in a certain way, with the central, original or prototypical model.

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