

3.

Walls and Windows – Or How Space (may have) Shaped Semiosis



Dust Motes Dancing in the Sunbeams (Vilhelm Hammershøj 1900)

Abstract:

In this essay, I explore the possibility that semiosis emerged in human evolution through an integration of basic properties of perception and conceptualization on the one hand (iconicity and causal reconstruction), and basic properties of intersubjective gesturing (deictic attention-monitoring) on the other. The integration happened because these components all share a proto-semiotic spatial divide separating the *proximal* (an interior space) and the *distal* (an exterior space). This divide would stem from early human shelter building (architecture). Hence the title: it is about walls and openings. Corollary: Art consists in re-exploring the origins of semiosis. Science and religion have competing deictic enunciative structure based on semiosis.

1. In/out. Perception as Completion. Perceiving through a Wall

We would all like to better understand the origin of human semiosis, that is, the use of these strange sounds, gestures, and objects by which our individual minds, our friendships, couples, institutions, societies, and cultures work and develop the immaterial substance we call *meaning*. In this essay, I will explore the idea that a

particular circumstance of the way humans came to invest and interpret space may have played a crucial role in the genesis of semiosis. In a contemporary view of cognition and semiotics, any theory of meaning is necessarily linked to a genetic perspective on meaning; a better understanding of its *origin* is the core of a better *theory* of meaning. In this sense, theory and history must be as related as genetics and generativity.¹ The same principle holds for theories of language, in so far as linguistics is an important part of semiotics.

All languages have schematic expressions referring to distinctions in physical or imaginary space, such as, in English: *here/there*, *near/far*, *high/low*, *deep/shallow*, *wide/narrow*, *up/down*, and the pair that we will consider with particular interest: *in/out*. The latter pair, as well as the preceding one, consists of verbal ‘satellites’, adverbs of direction (*going out*, etc.) or position (*standing out*, etc.), and more specifically indicates a distinction between two parts or portions of space, one of which is *open*, namely *out (there)*, while the other is *closed*, namely *in (here)*. The closed part is separated from the open part by a closed boundary: going *in* is entering a bounded closure and going *out* is leaving it and achieving an open, unbounded location (cf. the expression: ‘out in the open’). It may be straight forward and relevant to say that the semantics of *in* is a container schema, and that *out* is the (dynamic) negative or (static) complementary of that schema. Containers are vehicles or places, or both, like bodies. Bodies ‘contain’, like places, and additionally move and carry around things they contain or hold on to. However, there is an evolutionary moment in human prehistory that may have been overlooked by theorists of pure embodiment: human *habitats* include the sense of an *interior* as opposed to an *exterior* – a cave, a shelter, a building, or just a yard marked off with stones, or graves... , including all and any appropriations of physical space that can offer a protective (en)closure – and thus, imply a demarcating ‘wall’ separating the place where persons would safely sleep, eat, communicate, celebrate, and keep tools, weapons, animals, from the open and unpredictably dangerous outer space.² The physically implemented distinction between an interior and an exterior space, a

¹ As this view was neither Peirce’s nor Saussure’s, let me refer to two contemporary cognitive and semiotic researchers who pay attention to the problem of human semiotic evolution, albeit differently: Merlin Donald (2001) and Terrence Deacon (1997).

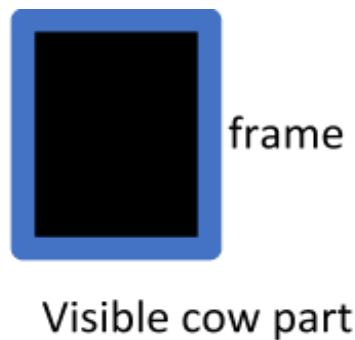
² The eventuality of a dangerous or oppressive interior opposed to a liberating exterior is of course just as relevant – the contrast of dynamic conjunctures between the opposed parts being the point.

primordial architectural 'concept', notion, or idea, is – I will claim – of major importance, first of all, to human *visual and acoustic* competence, but extending to the phenomenology of distal and proximal perception in general.

The human visual competence shares a basic property with most or all animal systems of vision: it integrates optical information into a *gestalt* of space and object that allows the organism to *categorize* certain places, individuals, and objects related to places and individuals. The phenomenon of *Gestalt* formation and the phenomenon of category formation are linked; we categorize what we 'see' in the very act of 'seeing'. Other *qualia*, that is, primary sensory bits of information, are of course relevant to the Gestalt integration leading to the recognition of a member of a category (thing: landmark, tool, weapon, food or danger; animal: danger, food, mate, ally...), but the *distal sense modalities*, vision and hearing, are essential to the process that determines this basic cognitive process of immediate Gestalt integration and the mechanism of categorization, at least in birds, in primates, and humans.

However, the notion of an interior versus an exterior space affects human visual competence in a non-trivial way. *Looking out* through an opening in the 'wall' of the closure is different from just looking around in the open landscape of one's *Umwelt*. Looking from the inside through a *framed* opening allows the subject to visually access a fragment of an outside situation that has to be reconstructed mentally and without support from new input obtained by bodily motion in the landscape, since the body of the perceiver is precluded from that situation by the wall. Visual Gestalt structuration of the whole of an object, a locality or a situation only from the part shown through the framed opening – the 'window' – is more radically visual-only and more actively imaginary than it would be without the wall. There is a proximal visual *signifier* – what is accessible through the opening – and a distal *signified* state of affairs, thus as the Medieval philosophers would say, a *sensibilis* part separated from the *intelligibilis* part precisely by the wall.

Fig. 1. Gestalt building through a wall.



Intelligible cow whole

This is an act of cognitive *completion* in perception. When the proximal visual information (now a signifier) and its distal meaning (now a signified) are metonymically separated in this way, the completion is an act of interpretation of a visual sign, an *icon*. The same line of argument can be made for the distal sense of hearing; in this case, it is equally a matter of Gestalt perception to 'make sense' of a sound heard through a wall (for example, a scream); hence an acoustic *icon* is in fact being interpreted by an act of imaginary completion.

The example in fig. 1 illustrates an interesting semantic aspect of iconic completion, namely that the visible or audible part is perceived as a singular entity (*this* animal part...), whereas the hidden, intelligible part must be perceived as generic (...is part of *a* cow). In other words, the same gestalt contains a generic, categorical part and a singularity. The hidden part is more 'abstract' than the windowed part. This is phenomenologically plausible, since completion has to be sketchy.

2. From Proto-semiosis to Real Semiosis

The subjective contribution to the process of Gestalt constitution and quasi-simultaneous categorization of the input information, in an iconic cognitive completion, is limited, in the sense that only the elementary and automated processing of sensory 'data' and a conclusive cognitive act of immediate recognition based on automatic projection of memorized categories are involved. Perception as such is not yet semiosis. However, when distal sensory perception occurs in an interior space and leads to at least hypothetical ideas about states of affairs in the exterior space offering (through the wall) the partial information perceived and interpreted, then perception does become a form of proto-semiosis. The two complementary parts of the process

occur in distinct *mental spaces*: one containing what is actually seen, the other containing what may be the source, context or cause of the former. There is thus a proto-semiotic link between these two parts, as if they were respectively the expressive and the content part of a sign, two parts that are of course generally blended in a complex mental space of perceptual-conjectural structure, stabilized by what we call a cognitive principle of 'evidence': what we 'see' is what there 'is'.³ This principle is fragile, as all children have to learn, and in adult perception it gives rise to a basic modalization : what we think we see is (only) *possibly* there.

Visual and auditive neuro-cognitive processes of completion are generally fast working and automatic; but the input information can be difficult to interpret and process. Distal perception and conceptualization are more complex than proximal perception and conceptualization. This complexity, due to distance or to blurred signals, slows down the act of perception and calls for conscious attention; it is no longer a matter of few seconds but sometimes of minutes of 'reflection'. When this happens, the act of perception is also an act of *conception*, or reflective ideation, because it has to mobilize and use the subject's schemas of *causation*. The signified content of the iconic completion is more radically hidden, or absent, and more radically hypothetical, than before. It is immediately inaccessible, it has to be slowly 'guessed', and the result of the hypothetical interpretation may easily be reversed within the focus of conscious attention that tries to establish it. In such cases, the semiotic tradition from C. S. Peirce will call the semiotic process *indexical*, and it will call the sign function implied an *index*. It is important, however, to grasp that the proto-semiosis of completion based on a framed input is only different from the elementary iconic completion by being inhibited, due to a problematic, immediately contradictory significance of the triggering information. *Causal completion* of the connection from an effect (proto-signifier) to its possible cause (proto-signified) again has to use two mental spaces, but their blend has to be stabilized by a *causal schema*, which is much less 'evidential'. Human cognition uses several causal schemas, so our 'explanations' of experienced strangeness often differ drastically. Causal completion draws much more on imagination than does visual or auditive iconic completion, because it allows the 'cognizer' to refer to entities without perceivable qualities, such as invisible forces or other people's intentions. Still, these

³ On mental spaces and blending, see Brandt (2004) and Brandt & Brandt (2005).

entities will be linked to the given proto-signifiers through a process of completion and categorization; in this sense, the *slow* process of causal completion and the *fast* process of iconic completion are aspects of a cognitive continuum. A cognitive phenomenology of human perception will have to acknowledge both iconic and causal completion and to understand their dialectics in time: a causally 'intrigued' subject will search for new iconic information, which may lead to more causally 'intriguing' input, and so on.

It would be more straightforward to identify the iconic and the causal (indexical) completions as rudimentary forms of real semiosis, if some aspect of interpersonal *communication* were involved. If a person points to the window in order to show another person the view of the landscape 'out there', the analogy to showing a *picture* of the landscape is more convincing, in so far as the resource involved in interpretation has to be the same, namely the cognitive routine of completion – apart from the capacity to consciously direct one's attention to something 'shown' by an intentional gesture of another subject. This attention-controlling capacity, a conscious sensitivity to *deixis*, is presupposed in all forms of human communication and calls for a much closer look than is common; I will claim that it is *this* phenomenon that makes communicational semiosis symbolic.

3. Real Symbolic Semiosis

In sentence constructions like the following, "He signified to me that at even-tide a great flood would be loosed upon the earth."⁴, the verb *signify* is used about intersubjective communication without indication of the manner or means of communicating. This ditransitive use, the verb taking both a direct and an indirect object, thus implying both a receiver and a message, corresponds to the idea that "someone intentionally does X in order for someone else to perceive this and interpret it as a *call* to understand or do Y". It means that S1 'symbolizes' (X) to S2 in order to call for some mental and maybe physical act (Y). Signifying is 'symbolizing', transmitting symbolic doings (Y). How does this work cognitively?

Signifying is deictic calling (X) and iconic showing (Y). As an example, one that seems prototypical to me, let us consider musical conducting. Here is the great conductor Michel Corboz in action.

⁴ Padraic Colum, *Orpheus, Myths of the world* (1930), The story of Uta-Napishtim and of the deluge that destroyed all that was on the Earth.

Fig. 2. Conducting is signifying: calling and showing.



A single person communicates with a choir or a symphony orchestra by moving a stick in his right hand, gesturing with his left arm and hand, and using facial expressions and eye movements. He iconically *shows* his manifold addressee 1) the sound he wants to hear from each group of voices or instruments, 2) what he feels about what he hears back from them, and at the same time, he symbolically *calls* for 3) a tempo to be followed immediately by all players and singers, and 4) a prosody (legato, staccato, etc.) to be followed.

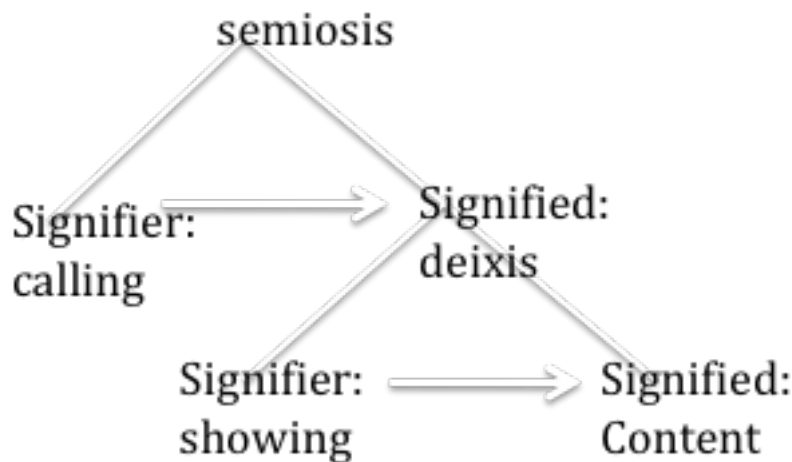
The difference between showing and calling is categorical. In language, the discourse types distinguished as description, argumentation and narration are forms of showing and typically held in the third person, whereas calling is done by vocatives and proper names, using the first and second person mode. Furthermore, in language, calling is connected to showing by the enunciatinal (pragmatic–morphological) profile of the utterance. One can say: “O Amanda, I love you!” articulating the *call* (O Amanda!) and the state of affairs grammatically *shown* (I love you). The showing has to be performed by suitable theatrical postures while pronouncing the words; prosody and theatricality must be concurrent. This theatrical aspect additionally addresses possible bystanders, observers, witnesses. In the same sense, the conductor is also addressing or calling on the audience and showing or displaying his perception and interpretation of the music performed; his gesturing takes place in an imaginary window connecting the ‘here and

now' of the material performance, that is, the 'interior' space of the concert hall, and the immaterial place of the sounding landscape, that is, the 'exterior' (invisible, abstract) space of the music itself.

The deictic structure of intersubjective communication, or real semiosis, consists in an *embedding* of an iconico-causal relation of completion *in* a pure relation of calling.⁵ The embedding itself creates the *signifying* act as a combination of calling (someone) and showing (something), and allows compact gestures (such as pointing), the use of pronouns (*this, that, here, there, etc.*) or programmed signals (such as military horn signals or telephones ringing) to embody this act of signifying as instances of *deixis*.

The architecture of real semiosis thus defined could therefore be analyzed as a Hjelmslevian superposition of predefined sign relations, similar to a diagram à la Roland Barthes' semiology, namely taking an iconico-causal signifier-to-signified (showing) function to be the signified of the super-ordinate signifying (calling) function corresponding to the enunciatonal gesture or to its equivalents in reified expressions like writing, diagrams, coded symbol strings, sign posts, or esthetic objects in general. Deixis as such would be the node connecting the two functional levels of meaning production.

Fig. 3. The deictic structure of semiosis.



⁵ Barthes' semiology (1974, 1985) suggested to analyze certain semiotic systems as semiotic functions embedded in other semiotic functions, following Hjelmslev (1943, 1993). In Hjelmslev, connotation thus lets a semiotic function be the signifier of the connotative function, which adds a secondary signified. Metalanguage has a semiotic function in its own signified; so, a function signifies another function. In my view, each 'function' has to be established cognitively, which is what I am trying to do here.

The lower, embedded level of this architecture is directly based on the wall divide discussed in this paper. The upper, embedding level (the 'metalinguistic' function) would be based on an indirect version of the wall divide; in this indirect version, an imaginary wall separates the caller and the addressee, but the frame (window) of the signifying itself connects these two spaces – the addressed subject of course appearing in the interior space and the caller, the addressing subject, appearing in the corresponding exterior space. The addressee 'perceives' what is communicated to him, and in the first place 'perceives' the call from 'out there' where someone calls for his attention. Therefore, the embedding fulfills the same completion as that which is implied in the iconic-causal relation. However, this time, the completion is a *semiotic* interpretation.⁶ This semiotic completion would be the feat that distinguishes our 'symbolic species'. I propose to understand it as a process following upon the direct wall phenomenon as an indirect version, slowly acquired in the course of human cultural evolution. We know that it is still a fragile junction of two distinct mental processes; some psychological conditions lead to processes of *hyper-semiotic* completion (paranoia, over-interpretation), whereas other conditions yield *hypo-semiotic* completion (the autistic spectrum, hence its deficient 'theory of mind').

4. Some Consequences of this View

4a. Art. – Music is a striking example of pure semiosis in the sense developed here. Even without a conductor, performing musicians can be said to conduct each other.⁷ To play⁸ is to be, in a theatrical sense, on stage for a moment, and to signify to someone through the semiotic frame, the imaginary window-in-the-wall. What appears in this framing window may be referred to as the 'text' of the act of signifying – even if it is only 'written' in the memory of its addressees – and we can then say that the deictic node in the diagram (fig. 3) is the structural pivot that articulates the *enunciation* act (upper level) and the *enunciated* content (lower level) of the text in question. Human semiosis

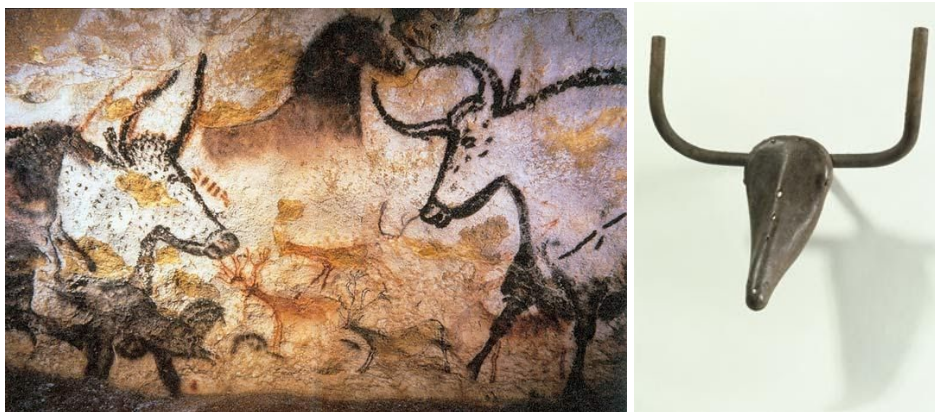
⁶ The *act* of signifying (something to someone) therefore implies a certain degree of self-theatricalization of the communicating subject. To signify is to be 'on stage' as an actor or as a conductor. The stage being the frame, an opening in the imaginary wall. The 'signifier' must signify himself in the first place. All communication is necessarily theatrical in this sense. A completion is *semiotic* if it responds to a call to follow and share the attention of another person, the caller.

⁷ The pianist Glenn Gould famously used to let his gesturing left hand conduct his right hand's playing.

⁸ The verb *play* thus has interestingly close meanings, involving the fields of music, theater, games, sports, and social interaction (to play tricks on sm.). All involve strongly framed and formalized behaviors assigned special evaluation rules.

appears to start with such an articulation of enunciation and enunciated, which in the first place makes musical and pictorial activities and arts possible and meaningful under suitable circumstances. Art is deixis. Art in general is therefore a primordial field to consider among practices appearing at the origin of human semiosis: music, dance, chanting, and theatrically ritualized collective body movements, possibly accompanying the first picturing acts leading to what we call painting and sculpture. These pre-historical representations may have required very specific circumstances, but some felicity conditions in esthetics are still present and might be surviving archaic features. Thus, art is performed, produced, and received in a particular *mental mode* that can be characterized as concentrated, attentive, slow, respectful, ceremonial, and often slightly trance-like, enthused, as if performing it were in itself intoxicating. Sacredness as a cultural category would be characterized by the same behavioral features. Art ‘opens a window’ toward a reality different from the one experienced on the off-stage, trivial, proximal side of the wall.⁹ We still associate *beauty* with light filtered through a medium (example: stained-glass windows in churches), and in a different key: local suspension of the wall itself, such as in the Romantic view of ruins (interior *is* exterior), or the Classical view of nakedness (interior behavior *in* exterior contexts – from the Ancient Greek sculptures to the modern nudes), or the universal public reference to instances of intimacy in poetic or fictional literature, all examples of interior phenomena in an exterior context of presentation.

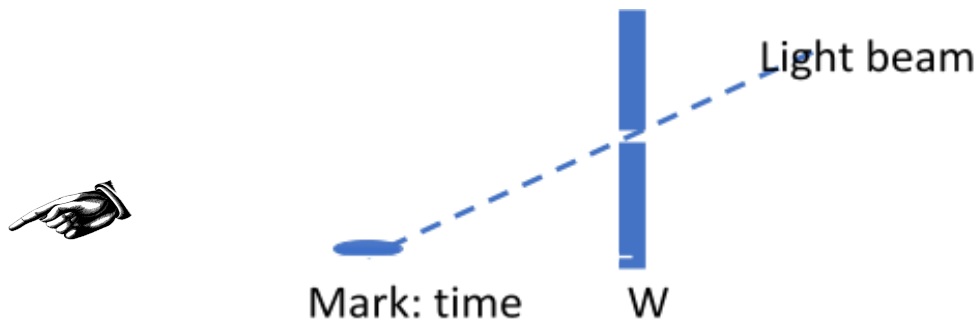
Fig. 4. From Lascaux to Picasso.



⁹ Of course, cave walls do not have windows; and the cave paintings, which often overlap each other or appear to be unfinished, seem to indicate a lack of clear iconic framing, which has intrigued researchers. If the upper paleolithic belief is that the painted being is somehow present in the representation, this makes the painting an act of calling but not yet a (distal) “showing”, except for modern eyes.

4b. Science. – Here is an indexical-symbolic chronometer, much like the ones found in temples in different cultures, to determine the landmarks of the calendar.

Fig. 5. Indexical-symbolic chronometer.



Scientific instruments can be compared in general to *probes* of this kind: we are on the (interior) life-world side of reality, but physical reality is on the (exterior) other side, which cannot be perceived directly; what we receive are signals (indexical) through the wall, to be recorded (symbolically marked) and then interpreted by inscription into a system. *Measurement* as such follows the same principle; we are on the interior side of the wall, and there is a reality 'out there' that we can only access through *probes* and interpretations, since it cannot be perceived directly by our senses. Our interpretations of this radically distal reality 'out there' must often rely predominantly on imaginative marking, modeling, and theory. The marks are our 'data'.

In a semiotic perspective, science as such is clearly a cognitive genre of causal completion; but the story is much more complicated, since probing and measuring are cases of experimental activity and therefore imply the invention of particular artificial scenarios in which the 'input' – the signal schematically penetrating the ontological wall separating the accessible and the inaccessible part of reality – becomes 'data' when encountering a preestablished mark, typically a numerical mark¹⁰, on the inside. Here, the scientist will feel that 'nature speaks', as if there were, on the outside, a signifying subject calling on the observer, situated on the inside, in order to show him an aspect of 'what there is' out there. We may thus be able to say that scientific semiosis (as meaning production) lets nature 'signify' to us through an experimental opening in an ontological wall. *Methodology* consists in picking up the signal, translating it into discrete, digital

¹⁰ Numbers are directly related to rhythmic, deictic semiosis, such as 'digitally' counting beats in music and dance. Number systems are available in all cultures that use calendars and probably evolved in ritual practices that were involved in sacred articulations of social time.

information, systematizing such information categorically, and then interpreting it in terms of imaginable states of affairs; it further consists in systematizing and categorizing these explanatory imaginations, condensing them into models that can be described formally and related to other models accounting for related signal domains; finally, it requires reiteration of the experimental scenario and developing variations of it that are likely to test the involved models as to their explanatory force, compared to competing or just imaginable alternatives. All this concerns our attempt to find out 'what nature is telling us' through experimentally arranged parietal openings of as many kinds as we can think of. Creativity in science essentially consists in inventing probes, and then inventing systems for decoding their 'messages'.

The historical difficulty of developing scientific ways of producing knowledge about the world we live in is precisely due to the constitutive deictic semiosis based on the experimental *as if*: nature is not a musical conductor, but we may organize scenarios that make nature signify *as if* it were a conductor, a subject, a person calling on us to show us something we did not already know. This truly, intentionally and deliberately metaphoric figure of enunciation is likely to collide with the isomorphic figure of the *religious* experiencer, who feels and believes, non-metaphorically, that what comes through the wall is indeed an existing divinity's message to him. Scientific *as-if* modelling thus competes with and is an alternative to religious 'revelation'. We know that religiously 'revealed' truths are just as vividly experienced as scientifically distilled, hypothetical (often vividly hypotyposic) truths, or even more so, since they do not require long processes of control and formalization. These forms of truth in fact often clash, precisely because both rely on deixis and the idea of an external caller, or 'enunciator', who addresses an internal subject; both are conceptualized cognitively as forms of communication. If this external 'enunciator' is understood as a *constitutive fiction*, then elaboration, control, formalization and more control are needed in order to justify the hope of thereby obtaining real and trustworthy knowledge; if by contrast it is believed that the external 'enunciator' is an existing intentional and communicating subject, however unembodied, then the epistemic situation changes entirely and typically becomes intensely emotional: *Reality Itself is directly talking to you!*



Fig. 6. Leonardo da Vinci, L'annunziata

Human minds do not necessarily associate other minds and other physical bodies; the existence of bodiless minds is perfectly compatible with our cognitive principles, as can be seen in the phenomenon of *magic*, where so-called 'spirits', that is, invisible, non-embodied intentional forces, that humans can call and address by music, dance, speech or writing, are believed to inhabit places, objects and persons. Science is a fragile cultural invention, emerging extremely late in human evolution and incessantly threatened by archaic, emotionally more compelling ways to 'communicate' with reality.

5. Concluding remarks

The problem of understanding human semiosis, including both obtaining a theoretically solid classification of 'signs' and approaching the issue of its evolutionary genesis, is as complex as it is appealing.¹¹ A better understanding of our species and its culture-generating mental biology is particularly appealing in a cognitive perspective, and nevertheless inhibited by centuries of speculative confabulation. A clarification of the field is only within reach, I think, if the observable components of our semiotic practices can be linked to knowable phenomena that situate them in the context of a zoo-cognitive continuity – other higher species have iconic and (basic) causal *completion* and can *signify* – but also acknowledge the intriguing discontinuity that separates humans from their closest animal friends. This discontinuity might thus particularly concern one single structural circumstance: deixis. Humans can intersubjectively *signify*

¹¹ The *Handbook of Semiotics* (Nöth 1995) displays a perplexing profusion of attempts at classifying signs, signals, indices, symbols, icons. The evolutionary view is, however, absent.

perceptual completion,¹² a structural capacity, here identified as *semiosis*, which may be the major cognitive achievement that step by step made it possible to 'think' through multiple minds and eventually develop language and culture. This capacity emerged, this essay suggests, as a cognitive outcome of (or a phenomenon facilitated by) a new conceptualization of habitat space, or what we now call architecture, involving a decisive distinction of an open exterior and a closed interior. What is 'in here' belongs to 'us', and what is 'out there' does not (yet). If I am right, the social pronouns 'we' and 'our' are parietal: they refer to walls; the interiorizing wall and the deictic window shaped our communitary, collective living and thinking. Structurally, they shaped a *cognitive semiosis* that generated culture.

Bibliography:

Barthes, Roland, 1985 (1974), "Éléments de sémiologie", *L'aventure sémiologique*.

Paris: Editions du Seuil.

Brandt, Per Aage, 2004, *Spaces, Domains, and Meaning*. European Semiotics Series, No. 4, Bern: Peter Lang Verlag.

Brandt, Line & Brandt, Per Aage, 2005, "Making sense of a blend", in *Annual Review of Cognitive Linguistics 3*, Amsterdam: John Benjamins.

Deacon, Terrence, 1997, *The Symbolic Species. The Co-evolution of Language and the Brain*. New York: W.W. Norton.

Donald, Merlin, 2001, *A Mind so Rare. The Evolution of Human Consciousness*. New York: W. W. Norton.

Hjelmslev, Louis, 1993 (1943), *Omkring sprogteoriens grundlæggelse*. Copenhagen: Travaux du The Linguistic Circle of Copenhagen, Vol. XXV.

Nöth, Winfried (ed.), 1995 (1990), *Handbook of Semiotics*. Bloomington: Indiana University Press.

¹² Human individuals can therefore even *complete each others' completion* and signify the result for further elaboration – including rejection, negation, doubt.

