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The External Brain: Eco-Cultural Roots of Distancing and Mediation

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Abstract First, this article attempts to approach the problem of distancing from the psychocultural perspective, relating it with the basic mechanism of mediation that was proposed by Vygotsky. Secondly, it is a reflection on the combined process of approaching and distancing in human biological and mental processes, and the limitations of contemplating the development as a process that is assumed to proceed only in the direction of ever greater cognitive distancing. Finally, it is proposed that instead of conceiving contact and distance as divergent developmental paths, models should articulate both processes of approaching and distancing, as well as of social mediation and instrumental mediation. I suggest the ecological and situated nature of psychological operators of distancing as a process in an extra-cortical *mise-en-scène*.

Key Words cultural affordance, distancing, distributed functions, external brain, mediation, personal cultures, zone of free movement, zone of syncretic representation

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The External Brain: Eco-cultural Roots of Distancing and Mediation

A qué le llaman distancia
eso me habrán de explicar
Sólo están lejos las cosas
que no sabemos mirar

Atahualpa Yupanki

What do they mean by distance?
They'll have to explain it to me
The only things that are far away
Are those we don't know how to see

Humanity was recently a witness, through television, of a circular exercise of approaching and distancing. We watched—fascinated, with our gaze repeatedly turned to, and tortured by—the impact of two aeroplanes crashing into the World Trade Center. This—and the exotic vision of the attire of Islamic cultures—was rushed to us by television,

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interspersed with declarations by politicians expressing consternation and solidarity, indignation and vindication. Yet at the same time, taking a step back, we could distance ourselves from those images by listening to dialogues and declarations about less visible and more conceptually charged matters: peace; the Huntington 'model' of the confrontation of civilizations; economic and social interdependence; solidarity; desperation; the communicating vessels of tension; the relationship between economics and uncertainty, or between freedom and security. Involvement and explanation, emotion and cognition, anchoring and distance have shown themselves to be equally necessary. The spontaneous empathy with survivors present had to be combined with the difficult empathy with victims who were torn into pieces or were not present at all.

This is the trademark of our human mind, of consciousness and conscience. A mind that is capable of cold and distant abstraction, like the inert mind of computers, but at the same time of embracing and comforting the wounded, like the psyche of the living organism that expresses itself via interaction and contact.

In this article I shall try to analyse distancing with the aim of bringing it towards culture, relating it with other convergent psychological concepts such as: mediation; bio-cybernetic models of representation, and the functional circle of perception–action; or the bodily and postural anchoring of mental operations. And I will reflect upon the ambivalent nature of distancing and the tensions that have emerged at the turn of the millennium between the two great human perspectives, tendencies or proposals: one that is rational and nostalgic for a complete virtual distance (a 'mind' view of the mind); and another, more dialectic and rooted in the ecological regulation of living beings in culture, in which distancing and approach operate in an articulated way (a functional and distributed view of the mind). Underlying the entire reflection is the idea of going beyond the notion that culture and abstraction—or culture and distancing—are opposite poles. Instead, I explore the possibility that the human processes of distancing and contacting are complementary and cultural at their core.

The Reconstruction of the Human Regard

Let us continue with the televisual motif as an initial excuse for our reflection. The human activity of watching television has shown itself in our research to be intimately related to the process of distancing and approaching, and directly linked to clearly marked cultural patterns in attentional development (del Río, 2000). If we analyse human conduct

in front of the television we find that many children are more enslaved to audiovisual sensory stimuli and are less capable than others of perceiving the semantic stimuli behind them. These children appear to have difficulty developing voluntary attention, and operate above all from involuntary attention. Their gaze follows the visual stimuli on the screen instead of following the narrative structure. These are children whose attention is dependent on the proximal stimulus and who do not distance themselves from it. These children—attentionally dependent— watch the screen after things happen, after it shows elements of an episodic and sensorily attractive kind (clinchers). Another well-defined type of child watches the screen before things happen, as semantically significant elements appear on it.

In a previous study (del Río & Álvarez, 1992b), we described two tendencies in the construction of televisual material for children (and indeed for adults). One of these tendencies appealed to involuntary attention, attempting to catch hold of it, thus reinforcing it and promoting it culturally. This tendency is found in certain types of cartoons and audiovisual material characterized by visual and auditory effects, violence and fragmented narratives. The alternative tendency shown by our analysis was another type of animation and audiovisual material, whose presentation, in contrast, was based on a stepped process of indirect sensory appeals. These systematically and gradually introduced audiovisual mediation mechanisms in order to make visible and relevant semantic and narrative content that was well structured, even though sensorially invisible to involuntary attention.

The presence of this latter semantic audiovisual mode in European programmes, which was a common and even dominant one 20 years ago, has diminished rapidly in the last 15 years, being substituted by the former mode, characteristic of programmes made primarily in Japan and the United States. The objective of this content analysis and of the diagnosis of children's attentional responses to television was to establish a relationship between the broad cultural patterns of the construction of voluntary attention and the development of the intelligent (cultured, or distant) gaze. The most recent study (del Río, 2000) attempted to consider this process of developmental influence within an experimental scenario of the formation of voluntary attention through mediations administered in an educational process. In the formative experiment we designed, children characterized by the weakness of their voluntary attention learned, through social and instrumental mechanisms for channeling their gaze—or visual regard—to pay attention to structural semantic elements and not allow themselves to be distracted by narratively irrelevant stimuli.

The positive results in the development of voluntary attention and the reconstruction of the television-watching patterns of attentionally 'distracted' children allowed us to confirm the historico-cultural hypothesis that the distancing of the gaze is a process that is culturally constructed on the scaffold of social and instrumental mediations that permit human subjects to free themselves from the natural and automatic level of the reading of reality. These semantic elements or mediations that permit us to see 'the invisible', the distant, that which is outside of our concrete perceptual context, can be conceptualized as cultural or indirect valences or affordances (del Río, 1996b). By means of these, the gaze is endowed with close anchorings—markers, handles or labels—in order to distance oneself, in a similar way to how the sailor situates buoys and lighthouses and captures signals that are imperceptible for others, and which allow him to see a course that would be impossible for them.

The Proliferation of Cultural Objects

The cultural mediators for redirecting the gaze—or regard in general—appear to have started, simply, to capture the audience in TV viewers, confirming McQuail's statement that media deal not with content, but with attention and audience (McQuail, 1992). The latest stages in the historical transformation of our way of functioning have confronted us with a massive increase—which at times appears out of control—of *cultural affordances*. With the substitution by media-generated and massively (as well as enthusiastically) adopted multi-mediated everyday practices comes psychological distancing. Rural culture was, without doubt, fully human, and its animal environment was already enriched with a dense layer of culture. Today it is being substituted by urban suburban or mega-urban cultures, in which feeding oneself, buying, remembering, loving, and orienting one's life towards a life-plan constitute complex behaviours. The primitive cultural supports or mediations for achieving such an orientation appear to have become independent and self-multiplying, inundating us with their noisy presence and making it difficult to subject them to their original auxiliary psychic function, thus obstructing our return to the path. When one becomes lost in them, the 'intelligent detours' lose their intelligence.

The Unintelligence of 'Branding'

What has resulted from the process of 'branding'? The means have become ends, the objects that we used for directing our mind demand that our minds be subordinated to buying them: economics and the

growing of objects have subordinated to their own ends psychology and people's psycho-genetic development. For example, our way of buying has been transformed from the buyer–seller social interaction and the physical handling of 'loose' goods, without label or packaging, into an object relationship of buyer with brand as an affordance of the product in a package situated on a shelf or in a catalogue, where the symbolic intervenes between us and the content, eliminating the traditional intermediation of social others and the social knowledge of the production processes behind the identity of the product (del Río, 1996a). Even scientific ideas now operate as brands, rather than as epistemic mediations (Hurme, 1997; Valsiner, 2001). We have recomposed our shared and communitary consciousness, substituting joint narrative accrual (Bruner, 1990), carried out with direct groups, by the vicarious contemplation of the famous in magazines and the continuous monitoring of politicians in their media dramatization. This has led all of us to live our politics in the public sphere of Habermas, not in Plato's *agora* but in an eternal electoral campaign, trying to participate from a distance, but connected every day, in our democracies.

Undoubtedly humanity is capable of establishing high ladders of intermediation with reality, and we have available a great cultural engineering for doing so. But this engineering, like any other, does not automatically put intelligence in any use that is made of its materials. Perhaps we have yet to stop and consider the virtues and dangers of our capacity for psychosocial construction, and to calculate the price we pay for living in each one of those virtual skyscrapers of representation. But let us leave such considerations for the second part of the article; what appears to us useful as a first step in our reflection is to situate the problem of distancing within the framework of an evolutionary cultural ecology.

The Regard, Cursor of the Active Mind

Cultural practices and personal strategies of perception are embodied in perceptual styles in which cultures or persons channel their gaze, avert it, divert it and attract it, in order to head along paths of some type of intelligent artifices towards certain objectives. If we look deeper into personal and social differences in perception, we see that this reflection on the individual's regard can be extended to cultural and historical differences. We are faced, in fact, with a phylogenetic, historical and cultural reconstruction of the natural perception–action 'functional circle' (von Uexküll, 1909), in which the gaze becomes the thread for weaving new mediated connections. Through cultural mechanisms whereby natural affordances and natural effectivities

(Gibson, 1979) are complemented or substituted by cultural ones (del Río, 1996b), the human gaze re-learns how to see, and moves from the animal environment, in which the visible is not conscious, to the cultural context, in which the conscious is frequently not visible. We learn to see the invisible, and to act on it, to sweep the irrelevant visible to the periphery of the invisible, on moving it away from the attentional focus. Cupchik (2002) cites the convergent thesis of the Russian Formalists, who maintained in the early 1900s that art should de-familiarize the everyday routine regard so that it could see new things.

Aesthetic theories too, as Cupchik (2002) points out, have clearly demonstrated that the nature of our mind is reflected in our way of seeing. The functionalist and ecological tradition of perception (Gibson, 1979; Koffka, 1935/1973; Lewin, 1936, 1938; von Uexküll, 1934) had already shown convincingly that species 'learn to see' and construct specific perceptual environments and specific mechanisms of perception. In this sense, animal consciousness makes genetically accessible to the nervous system that which its specific sensory systems of news-gathering have learned in its evolutionary process. McLuhan (1964) and Gombrich (1969, 1972) have shown that cultures also, over the course of their histories, learn to construct images and see in other—idiosyncratic—ways through them.

The historical evolution of perception thus begins a divergence from natural evolution: in the latter, that which is naturally visible is not of necessity conscious, for it is assured by the pre-equipment of the natural psyche; it is that which is naturally invisible, and requires cultural mediations to make it visible, that is strange and indigestible for the natural psyche, and therefore produces consciousness.

Through this cultural process of re-learning to see, the child manages to master the perceptive environment—which at first, as in animals, imposes itself upon him or her—through the use of external psychological and semiological instruments, and then through internal ones, directed towards him- or herself. Put another way, perceiving and acting in a cultural context—densely mediated—is impossible unless we learn to make at least minimal use of mediations. The work of Zaporozhets (1977) showed how the attentional process is culturally reconstructed, so that the child's external gaze, mediated by culture and by the intelligence of others, becomes, in turn, intelligent: rather than following the stimulus, it anticipates the stimulus. And through the interiorization of mediations, the regard oriented outside becomes an 'interior gaze' in the same way in which external action becomes mental action.

The Triangular Regard: From Gaze to Communication

We culturally re-learn *how to see*. Luria showed the perceptual field as a field in which the child's attention is enslaved by the external flow of stimuli, and in which the adult constructs voluntary attention by highlighting the structurally relevant elements. We might say that adults lend the child—who is enslaved in his/her passive attention—their active attention through this process of highlighting stimuli and capturing and guiding the child's gaze.

All shared gaze—visual regard—can be analysed as a triangular process (del Río 1996b). Triangulation has a subject–object–subject structure in early interaction. It begins to operate within the grammar of action, on the formats of interactive communication, such as those analysed by Bruner (1983), Greenfield (1991) and Kaye (1982). Communication is based in these early stages on co-acting on the same object, and acts as a mechanism of exploration, analysis and structuring of reality from the framework of the shared psyche. Early human interaction is a complex dynamic of perception and action, or co-perception and co-operation. If distancing is primarily perceptual (a point of view, of position, of explanation), and approaching is above all a matter of action and implication, then, in this triangular perspective, perception and action form an inseparable cycle. Thus, communication is *both* perceptual and enactive—distancing (in perception and meaning construction) enables approaching in the action and feeling domains.

Ontogeny: Dyadic Play and Beyond.

At the first levels of dialogic play, the child masters the rudiments of triangulation: the baby looks into the mother's eyes, then at the object the mother is looking at, then, if the mother's hand moves the object, once again into the mother's eyes, and so on. Here, the technical mechanism of the Zone of Proximal Development is in progress. It initiates a long process of episodic encounters with the world that lead to the constructing—by the child—of the higher psychological functions, such as voluntary and structured attention, intelligent perception, memory strategies or mediated memory, and discursive intelligence. Insofar as the mechanism of triangulation of the regard permits the articulation of social mediations with instrumental ones (or vice versa), human cultural development is enabled.

At the macro-cultural level, this process allows the articulation of an instrumental mediation on one level with an instrumental mediation on another. For example, the image can come with the word, the desk with a notebook, a text with a computer file, or the computer itself with my territorial activity in my office, or even the images of the attack on

the Twin Towers together with those of the bombing of Afghanistan and with the discourse of a political leader on the television, or with the remarks of my son about the matter over dinner.

In a similar vein, a particular social mediation at one level may come with a social mediation on another. My individual self relates with an interior self, or my self with a symbiotic family group; and that in its turn with the cultural community group (e.g. the village); and, finally, with 'the country' and 'the public sphere'. There is constructive integration of the varied and infinite dimensions of what Juri Lotman (1990) called the *semiosphere*, underpinned and ordered by this mechanism of more or less connected triangulations.

Voluntary Distancing as a New Form of Approach

Even if distancing oneself perceptually involves adopting another point of view, this does not necessarily imply that its objective and final result is to place oneself at this distance. The human gaze establishes mediated detours and distances in order to be able to contemplate a wider reality, but it also traces, in a complementary way, short-cuts and new approaches in order subsequently to act upon it.

Any point of view implies, by definition, an idiosyncratic type of relevance of the object for the observer, and with it an ultimate link with his/her action on it, an approach to that which is observed. Perception and action go hand in hand, and if the break provoked by mediation in the natural ecological functional circle of perception–action were not compensated by mediations for making action accessible, the representational distance would become harmful for an acting organism. Culture does not break the circle, but rather expands it and transforms it, creating more distant dimensions and longer reaches, but also deeper approaches.

In this sense, any perception, however distant, starts out from a final link with the object, and, in the last instance, we cannot consider distancing other than as a new and more complex form of approach. But how, and from what, do we distance ourselves? The media tradition of historical thought has read the history of human cultures as an ascent from the dictatorship of what is local and immediate, to the freedom to choose that which is 'delocalized' (to use Thompson's [1995] term) and mediate. But these reflections on this humanizing medium have been ambivalent and contradictory: McLuhan popularized the debate on the media with a discourse that moved between 'integrated' enthusiasm for 'the extensions of man' and a pre-apocalyptic stress for its associated 'amputations' (McLuhan & Stearn, 1968). Models of mediation

occupied a large part of the theoretical output of the last century in a variety of disciplines. A series of scientific constructs were constructed in an attempt to explain and fill in the abyss between body and spirit. From Descartes to *Descartes' Error* (Damasio, 1994), the efforts continue. But it is no easy achievement, and paradoxes and ambivalences abound. Bruner (1972) speaks of McLuhanian extensions/amputations as 'prostheses'; Vygotsky (1984) stated metaphorically that the nature of the human intellect, that which is 'natural' to it, is precisely that which is artificial (mediation as artifact). When Luria (1979) coins the term 'psychophysical paradox', he does so in order to draw attention to the apparent abyss and the theoretical distance between the psychic processes of consciousness and the organic and material actions of human subjects. A large part of the work of Luria and of Vygotsky himself attempted to fill the vacuum created by the dualist mind–body models, and they proposed mediation (the process by which this cultural medium is created) as the basic mechanism of the representation that characterizes higher functions.

Ambivalence of Consciousness

Historically, in psychology, the theoretical distinction between animal intelligence and human intelligence has focused mainly on the presentational/re-presentational distinction. In its journey to becoming human, the child would start out from the animal territory dominated by the 'here-and-now' until reaching (passing through) intermediate stages—such as Wallon's situational intelligence (Wallon, 1942) and Piaget's sensory-motor and concrete intelligences, from which it would escape through a 'succession of de-centrations' (Piaget & Inhelder, 1969) to reach a 'liberation from the immediate and the tyranny of the particular' through distancing and arbitrariness with respect to the concrete spatio-temporal context (Bruner, 1966). It is the voyage to the territory of the 'there and at another time', that is, of formal re-presentational intelligence. In this new territory, Vygotsky would say, we interpose on the presentational orders of the dictatorship of the present context our mediational or representational skills, tricks or artifice in order to transfer ourselves virtually to new life territories of mediated experience.

This duality and ambivalence of the processes of consciousness is as important as it is uncomfortable, and its paradoxical nature may immobilize the researcher, who tends to prefer launching him- or herself into action and beginning at one of the two extremes. Thus, many psychologists set up their camp in the representational mindscape. Once their base is set up in the present well-being of mental

engineering and reason, they work on a psychology of the cognitive psyche, as if that had always been there. Others, perhaps dedicated to ethology or animal behaviour, find their shelter on the shores of biology. The distant relationship between the two camps is cordial, and they reciprocally concede the benefit of truth by means of an unnamed and underlying assumption, not infrequently tinged with innatist beliefs.

But the 'no person's land'—the real territory of research between the two camps—is underpopulated, and in the last few decades weeds and thorns have burgeoned there. The surface of the road that would unite the two camps could link the animal and the symbolic minds. The latter continues to be the privileged region in which the epistemological psychologist longs to set foot.

External and Internal Representation

Living organisms notice what occurs in their environment and transmit this news—taken in through the skin—to the organism as a whole (inside the skin). This leads to the stimulus being re-presented or transmitted in some interpreted form—not directly—via a series of re-presentation steps that constitute the nervous system. Von Foerster (1974) calls this process *recurrent computation* (description of descriptions or computation of descriptions, that is, from stimuli received from reality and not from direct stimuli).

Vygotsky, long before the cybernetic models that would later define this internal process of representation, noticed that the basic mechanism in the development of the animal nervous system appeared, in the human being, to have an external replica. He tried to analyse mechanisms analogous to the internal reflex and the nervous connections, but that were outside the skin or the organism, through intermediaries that, instead of neurones, would be, to use some of this author's diverse terms, mediations, stimuli-media, extracortical neurones, signs or psychological instruments. It is within this ecological and functionalist perspective, which is perhaps not the most common in readings of the Vygotskyan perspective, that we might extract its maximum potential for advancing towards a cultural psychology or a cultural neuroscience.

The Vygotskyan view for revealing the key link of this new neural chain was crucial: in order to liberate his/her behaviour from the stimulus environment, from the concrete situation that limits and determines the behaviour of animals and children, the human subject learns to condition him/herself: 'In the instrumental act man masters himself from outside, through psychological instruments' (Vygotsky, 1984, pp. 83–84). Formal intelligence can be seen thus as an intelligence

that in some way continues to be concrete, since it still manages in a direct way the mediational mechanisms that make formal representation possible (Vygotsky, 1984)

In a symmetrical way, and just as the animal organism creates an active and interested replica of the medium in its nervous system, the new cultural medium that humans subject to their psychic needs, culturally organizes a replica of the new human mental functions (del Río, 1990, 1994; Vygotsky, 1982a, 1982b, 1989). In this sense, mediation, be it provided by a person (social mediation), an artifact (instrumental mediation) or both mechanisms at the same time, establishes, for Vygotsky, a new type and a new unit of representation that now reinterprets, channels and organizes information in a kind of cultural organ or cortex, outside the skin.

Heinz Werner (1957) extended this idea of human dominion over stimulus and context, and formulated it as 'the orthogenetic principle': 'Increasing subject–object differentiation involves the corollary that the organism becomes increasingly less dominated by the immediate concrete situation; the person is less stimulus-bound and less impelled by his own affective states' (p. 127)

In recent decades, it is clearly thanks to Irving Sigel (1970, 1982) that there is available a diagnostic model and empirical evidence of this distancing of the dictatorship of the stimulus that is proposed as the architecture of the human mind by Vygotsky or Werner. This model has the advantage of bringing the idea to the level of diagnosing development and orienting educational practices. It is possible that the stage is now set for an analytic work on the cultural fabric of this powerful machinery of distancing and representation, in order to move from its mental characterization on an internal level to its cultural characterization on an external level.

The Situated Cultural Brain—Our 'Third Hemisphere'

I would like to posit that human beings use the environment as a 'third hemisphere' of the brain. This allows us to articulate and restructure the functioning of the new totality of the nervous system, simultaneously external and internal (del Río, 1994). This new neural system is maintained as a basic context of our mind throughout our lives. Neuroscience could thus necessarily be extended to embrace a '*cultural neurology*'; in the same way that Ramón-y-Cajal learned to dye neurones to reveal their fabric, we should perhaps learn to locate, 'dye' and examine cultural mediations in order to understand the fabric of our higher psychological processes.

This idea of our brain being located within our environment—through its organization—fits uneasily within the models of psychology, which in general have considered ecology as something relevant for our physical action but applicable to the human mind only in a quite limited way. And yet the millions of square kilometres of libraries, the thousands of Internet servers, the papers that accumulate mercilessly on our desks, the medieval stone crosses along the path that demand a moment of our consciousness, the baroque emblems as condensed proposals for living our lives, the press ads that define our everyday agenda and cosmos, the verses of the Koran on the lintels or the walls of houses, the Buddhists mantras inserted into daily practices, serve, more than for moving around the stage of life, for moving around that of consciousness. So we have woven the two together.

This 'third hemisphere', which extends the two hemispheres of the internal brain and reconnects them in a new way, situates human beings in a virtual space in which their internal directing mechanisms (genetic inheritance, instincts) for acting in the natural environment are reorganized into cultural mechanisms (novels, myths, rites, plans, science) to act in a new 'medium of media', replete with interrelated virtual and physical universes. The animal here-and-now becomes future-directed, directed from the there-and-the-before/after in this new scenario of cultural representation. We attract distant stimuli and responses to the concrete context of perception and action, and at the same time we distance other stimuli and responses and expel them. Or we may direct them towards their destination in the past—such as by taking a photo or making a note in a travel book. The immediate presentism that characterizes the basic animal psyche is capable of transcending itself by creating a wider context in which the resources of that previous psyche are managed at a 'certain distance'.

The external human scenarios themselves are scenarios in which the natural world has been interpenetrated by an omnipresence of external cultural corticality. There is barely anything that is not artificial in a bedroom, a classroom, a football stadium, a church or the desk for the Mac on which I am writing this text. Artifacts for doing are, in the ecology of the object and organic relationships, subordinated to social personal relationships and the artifacts for thinking and feeling. Whether we are talking about social mediations (the telephone operator who wakes me in the hotel at the appointed time) or instrumental mediations (using, more self-sufficiently, an alarm clock), or a combination of the two (the wife or husband who enters accompanied by the smell of freshly made coffee and opens the curtains to let in the light), *our human world is a functionally reconstructed world*. And if

external cortical richness already implies a great psychological development, once interiorized it can transform these riches into a veritable opulence of the higher functions.

External Distance and Internal Distance

If a first stage of the methodological problem obliges us to measure the capacity of distancing and to detect the abilities that correlate with or compose this capacity (Sigel, 2002), a second stage should lead to the detection (and anticipation and prescription) of the practices for developing them (see the Psychological Distancing Acts: Sigel, 2002). A cultural genetic approach would oblige us to define them precisely in the fabric of culture and to explain and be able to design the architectonic mechanisms that construct them.

Cultural-developmental research has traditionally followed a series of analytical routes. One of these, highly convergent with classical psychodiagnostic research, focuses on child ontogenesis (and implicitly assumes, so to speak, a general pattern in all these ontogeneses, except for deviations); this perspective involves tracing itineraries with general validity regarding the cultural development of each function. Another route has been that of the historical study of cultural genesis, that is, the transformation of the psychological functions as new artifacts have appeared or as the mediational fabric has changed through history. We were able to accomplish this work only for a portion, though a significant portion, of spatial abilities (del Río, 1990, 1997, in press), research that we shall not report here.

What I would like to underline is the appropriateness of 'demodularizing' the mechanisms of re-presentational and cognitive distancing. The assumption of distancing as an internal ability whose mechanism we do not know leaves us relatively unequipped for simulating it, constructing it and improving it in the real world. Cultural engineering is in many ways the sister of cognitive or technological psychological engineering, although its genetic explanation may establish divergences. It is necessary to open the 'black boxes' (and cognitive modules) in order to unravel the mechanisms of distancing.

Henri Wallon (1934) developed a model of postural and organic anchoring of mental actions that was highly convergent, in general terms, with the processes of appropriation/interiorization. The traces of motricity and the tone of abbreviated and interiorized mental actions are visible for any experienced child psychologist who can find, for practically any mental act, manifest *synkinesias*—movements that accompany in a postural complex attentional mnemonic or intellectual acts, such as when a child pulls out his or her tongue to write with

more concentration. Wallon maintained that mental actions, which are organic even at invisible levels, leave sutures and roots visible even in the exterior of the organism if we are capable of seeking the motor biographies of the mental actions of each subject and reconstructing the external action from which the internal action was constructed. This internal action will have left a trail for those who know this process, as clear as the trail of someone pursued by an expert tracker. Postural personalities and their connection with character and the way one masters oneself or addresses oneself would thus be connected to both the effective action and the affective and moral action.

The mental 'interior movement' of the higher functions is therefore supported developmentally by action and the degree of abstraction—or distance of the actions from the 'organic' to the 'mental'. It is united by a hidden ladder in which all mental actions remain rooted on solid corporal bases. Only by denying the organic origin of abstraction can we ignore those pillars and demand of the subjects 'pure' mental actions at the same time as we strip them of the organic acting bases of their personal culture (coffee, tobacco, prayer, a walk, the small or large discharge of motricity accompanying the mental action of he who handles a pencil or moves his legs in a meeting, he who dresses and smartens himself up in order to encourage himself ahead of a difficult negotiation or a wedding, or the preparatory gestures of kendo, or the rituals of the cavalry in medieval Europe).

The 'external brain' and its internal counterpart thus maintain a solid organic connection, without losing any of the advantages achieved of consciousness and distancing. Perhaps the excessive persistence of dualism is due to our habit of investigating only the terminal of these internal and external circuits, when the circuits have already been crystallized, and to not studying them throughout the process of their formation.

Interiorization and the Zone of Syncretic Representations

Interiorizing is not, as Leontiev (1981) rightly points out, a simple transposition of an external action to an internal plane. In the perspective we propose it is rather the gradual reconstruction of an effective action on the environment as an effective action on consciousness and the environment simultaneously. In so far as the human environment is made cultural and full of objects of consciousness, and insofar as our effective actions are reconstructed under the control of mediated operators, nearly all of our effective actions are syncretic, that is, they are also cognitive and communicative actions. The most important characteristic of this situated neurology is precisely its syncretic nature,

that is, the convergence of action and representation in our way of psychological functioning. This occurs in a Zone of Syncretic Representation (ZSR) (del Río, 1990), in which action and representation converge in a highly interconnected way. In this syncretic zone of activity converge social mediations (someone puts something [or someone] into the ZSR) and instrumental mediations (something puts something [or someone] into the ZSR).

The differences in processing reside not only in different 'strategies' of processing. Interiorization implies the construction of a new organic and neural structure of actions, which Pribram (1986) called 'wetware'. This new structure supports mediated actions in their diverse steps of internalization, and is finally automatized (like numerical calculation or the calculation of mental sizes or trajectories) by cortically 'modularizing' or placing in parentheses of consciousness distributed actions that are highly complex and stepped in their constructive process. The most important thing in relation to the emphasis we would like to make is that internalization and abbreviation literally become embodied as postural and organic connections for acting—the action of thinking is, in addition to thinking, action. It is impossible to achieve a pure process, that is, solely cognitive, a total distancing, for the thread that articulates the processes of perception and representation continues to be action at all times.

Cultural Embodiment

Before the human sciences approached these constructions to study them, it is clear that humanity itself had edified them with non-scientific means: the majority of the great religions, above all in their monastic models, have developed expert cultures for constructing the expert control of the body and the activation of mental states by means of scaffolds of bodily discipline, which are disciplines of the spirit. Professional armies and schoolmasters—throughout history as well as now—are well acquainted with the value of corporal discipline for constructing mental discipline, the value of organic actions for analysing, planning and controlling mental actions.

The great truth of mediation and distancing is that the cable that links us to our organic base can be very long, provided it is as long as it is thick. It is not the height of the psychological building or the distance to the organic ground that should give us vertigo, but rather the weakness of the structure of the chains of mediation, or the illusion of being able to stop leaning on them and escape from our biological humanity.

The natural functional circle (perception → action → perception) is

necessarily a cybernetic and situated circle, in fuzzy logic, with a character that is mobile and dialectic between organism and medium, as the cell biologist Faustino Cordón has proposed, or as Nikolai Bernstein or Alexander Luria would have proposed, with an analysis of the nervous process that is highly convergent with the cybernetic theses of Wiener or the biocybernetic ones of von Foerster.

Situated Distancing: The *Mise-en-Scène* of Consciousness

The psycho-ecological research that we have been developing within the scenarios of urban and traditional rearing and child development (del Río & Álvarez, 1992a: Álvarez, 1994) and on Castilian functional traditional architectures (e.g. monasteries and villages) (Álvarez & del Río, 1999; del Río & Álvarez, 1995, 1999) shows that the functional processes and protocols are inserted in highly culturally stable and typified scenarios, in terms of both their spatial organization and their temporal calendar. It has also permitted us to see that a culture can develop successful and robust functional constructions without the need for these to be totally individualized and interiorized. This has led us to deal with the analysis of functional operators and operations from a 'functional topography' that is presented to the subjects involved as an authentic '*mise-en-scène*' of everyday life.

If in the operational analysis of space cited above (del Río, in press), carried out from a cognitive-cultural approach, we found inserted frameworks, handles and labels of cognitive representation, then, from the present direct perspective on everyday life, what we find is drama and *mises-en-scène* in which effective activity, cognitive frameworks and dramatic activity are profoundly integrated. This should lead us to re-read the dramatic theories of mental functions (Politzer, Vygotsky, Unamuno, Zazzo, Harré, Goffman, and others)

In the light of this, representation no longer appears as an abstract process that is learned or develops apart from situated natural action. We see that, rather, the child arrives in the world of culture finding him- or herself from the outset in a ritualized dramatic and syncretic scenario in which adults situate diverse types of mediation (media and artifacts; symbolic systems; structures, formats and types of representation; narratives and content). And that in order to produce distancing, we produce situated ecology; in order to remove the child from his or her present context, the adult culturally enriches that present context; in order to take the child from this context to that of re-presentation, the adult inserts re-presentation and action themselves into the context, which is thus, syncretically, re-present-actional.

This would be the paradox of human genetic psychology. Adults

lend functions to the child in the ZPD, but they do so in order to insert in the child's animal Zone of Presentation disruptive elements that break the zone and restructure it as a new Zone of Representation. In order to control the operators of the higher cultural functions, it is necessary to control the operators of the lower natural functions (the stimulus). In order to construct abstraction and distance, they must be inserted in the concretion of that which is near.

It would therefore be simplistic to make a hasty and firm functional distinction between the 'contextual' and the 'symbolic-representational', given that the space of the representation employs as fibre the very scenario of everyday life. The analysis of the functions and of their distributed processing should take into equal account, then, the entire network of internal and external processings. It is therefore essential to recover the ecological conception and the mediational one. The latter is that which provides the mechanism that was lacking in the ecological conception to make it human, explaining how physical space becomes cultural and how symbolic space becomes integrated into physical space. Thus, the current pertinence of models of the child's context of development that can take account of this new mixed space (Zones of Free Movement, the Zone of Promoted Action, defined by Valsiner [1997]; or the Zone of Syncretic Representation [del Río, 1990, cited above]).

Traditional cultures have generated contexts of consciousness with powerful *mises-en-scène* that direct, plan and scaffold everyday functions and human activity. Frequently, their *mises-en-scène* allow consciousness simply to situate itself in the scenario (since it tends to be, through its design, a plane of consciousness), and the ZSR therefore becomes a locus of consciousness and activity at the same time. In other cases (think of a temple, a Christian or Buddhist monastery or a Zen garden), the design of the *mise-en-scène* aims to channel the activity in the locus of consciousness towards 'the inner life' of the subject, putting all the cultural architecture at the service of the generation of states and activities of consciousness. Frequently, we mix the two types of logic, and a subject can slip in a compassionate gesture towards his/her interior amid an activity directed towards the outside (such as a prayer or a fervent speech in a scenario of activity, like a footballer who makes the sign of the cross as he runs onto the field).

Cultural Designs of Mediation and Distance

Is there a canonical model of the development of mediation? This ecological and cultural reappraisal of the development of the psychological functions has been present on the scene of psychological science

for a long time, but it has in general been formulated within the framework of the great uniform regularities sough by 19th-century thinkers. Thus, although the explanation of cultural genetics is accepted, the rationalist tendency to a 'geometries of the mind', which has been criticized by Toulmin (1972), may lead us to propose, against the canonical view of the stages of development of logical constructivism, another canonical view of social or cultural constructivism. Zazzo made this criticism of his maestro Wallon, suggesting that he had fallen into the same need of 'good form' and canonicity in explaining development through social stages of development as Piaget had done with his stages of logical development. And as Vygotsky had done, we might add, with his 'cultural' stages of development, following a line of stages of appropriation/interiorization in the 'culturized' human subject. According to this line of Vygotskyan cultural canonical optimism, we would all pass (first cultures in their historical development, then subjects in their ontogenetic development, and then each one of the higher functions) through a process of progressive lending and appropriation (the social passes to the individual) and of mentalization (the external passes to the internal), in accordance with the Law of Double Formation.

This need for canonicity also afflicts the cognitive-cultural developmental models, including that of distancing. It would appear that body-to-body contact is characteristic of babies and the human child in its early stages of attachment and symbiosis but, as the child acquires mechanisms of representation and reflection, it begins to distance itself from the concrete and from that which is attached to the context. (See Sigel, 2002, p. 205: 'In effect, the direction of development goes from concrete to abstract. This route is generally accepted as the natural path of cognitive development.') The level of development of the cognitive functions would be linked to what is achieved in this process. From this it would appear to be inferred that functional personal differences are established on the basis of a homogeneous and continuous criterion in appropriation and interiorization. However, can the diverse proportions of social, instrumental and situational distributions be constituted by other than genuine designs—functional systems that are not only personal, but also 'have personality'?

It has been pointed out that in today's mass societies, the lack of narratives and representations of the life-plan and the quantitative dysfunctional proliferation of cultural mediations (or of cultural affordances that do not correctly fulfil their orienting function in the new representational system of consciousness) produce a new type of cultural presentism, a new dependence on the presentational medium,

though this time of a mediated nature (del Río & Álvarez, in press). Distancing abilities, measured only in their capacity for processing and not for structuring, can be subverted and become new generators of attentional dependency. Mediation itself, or distancing, is not sufficient for optimum development, and the increasing representational capacities of the human species are no guarantee of lucidity. Rather, they represent a cognitive opulence that does not necessarily ensure greater functional adaptation on a higher and more distant level of consciousness.

In terms of instrumental engineering this same emphasis has, interestingly, been made by Norman to analyse the quality of technological engineering from an eco-functionalist perspective (1988, 1993, 1999): the goodness of a technological design resides not so much in its technical architecture as in its psychological architecture, not so much in its rationality as in its human functionality. Meanwhile, and in terms of social rationality, Dahrendorf (1988) pointed out that politically liberal societies have promoted to a greater extent the liberties of more life opportunities and less community constriction of the individual, with the resulting loss of affective links and social satisfaction; in communitarian cultures, on the other hand, the opposite has occurred (more social affective anchoring, but greater coercion and fewer alternatives for individual freedom). In their transcultural analysis, LeVine and White (1986) establish similar distinctions. Greenfield and Suzuki (1998), based on their own research and that of others, have offered an equally cautious and open view of the models of development that are imposed through educational practices and models. Their proposal allows us simultaneously to defend culturally diverse conceptions of development, arguing in favour of the ecological validity and evolutionary pertinence of alternative models (e.g. oriental and Hispanic cultures, as well as the canonical Anglo-Saxon one in the United States) in which the functions do not move homogeneously and linearly towards total individualization and interiorization. A convergent approach is that which we have defended here, both in relation to Latin cultures and rural communities, on the one hand (del Río & Álvarez, 1999), and in relation to the intra-cultures generated around disabled subjects, on the other, proposing the potentialities of models of inter-dependence versus those of hard-line independence or 'independent living' (del Río, 1998). According to this line of approach, the situated and shared would not necessarily be inferior stages or episodes to be surpassed in the phylogenetic and ontogenetic process, but rather elements that could remain valuable and positive if they are configured in a cultural model of the distributed

architecture of our minds. (See, in Table 1 and Figure 1, a comparison of the assumption of mentalist optimism, against which would be a more flexible and intercultural hypothesis, both within the psycho-cultural perspective.)

A marked emphasis in independence would be strongly supported in psychic abilities for instrumental mediation and distancing. An emphasis on inter-dependence would be based more on abilities of social mediation and instrumental mediation, and on the capacity for distributing one's own and collective activity among them.

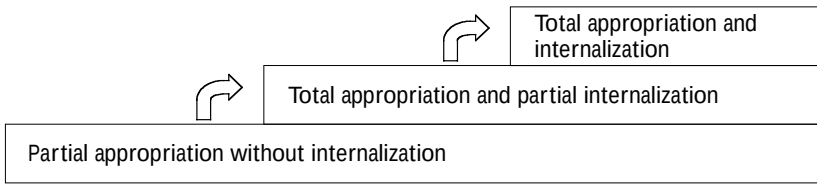
In the genetic model for independence, discontinuities of shared activity in the ZPD (in which others provide certain parts and the subject contributes others) should be finally resolved in favour of the subject, who will obtain the entire functional sequence. In the same line, the educational and cultural system will tend to contemplate these loans as 'provisional' and, if prolonged, as obstacles to development. In the inter-dependence model of development, certain cultures that reinforce shared work and social life in the community attempt—through the distributed design of activities and the valuing of the social links that make those activities possible—to maintain some of these discontinuities and loans that are culturally valued or have been made socially necessary (because of their greater practical effectiveness, their advantages for social cohesion or the feeling of well-being, or because of the cultural generation of a permanent educational context and a 'non-provisional' ZPD).

Table 1. Higher functions development: Appropriation–internalization & distribution–individualization levels

(A) Partial appropriation without internalization	(B) Total appropriation with partial internalization	(C) Total appropriation and internalization
Activities and abilities allowed or fostered by a given culture as specifically shared and distributed (e.g. social memory for events and family ties and relationships, housekeeping and collaborative work)	Total mastering by the subject of an activity although with external prostheses (instrumental mediators) (e.g. dictionaries and grammars, word processors, editing plug-ins, calculator, agendas, timetables and dairies, outliners and sketches for lecturers, etc.)	Complete appropriation and total interiorization (e.g. multiplication table, the Ten Commandments, prayers, counting, etc.)
Shared distribution: Symbiosis: external shared and situated functions (social + instrumental mediations)	Individualized distribution: Personalized external functions (extensions and prosthetic functions)	Mental reconstruction of A & B: Mental, internal individual functions

Note: Every subject develops functions through the three columns covered in the table, in personal, idiosyncratic construction and distribution.

(a) Cultural genetic model expressed in sequential simplified form (Vygotskyan mental optimism: *every* higher function goes through the Zone of Proximal Development passing from partial lending/appropriation to full appropriation + internalization)



(b) Cultural genetic model expressed in syncretic levels: the direction of development is maintained for some functions to reach full appropriation and internalization, although for *some* higher functions development requires structural sharing and co-participation and remains for the entire life more or less partially external and distributed

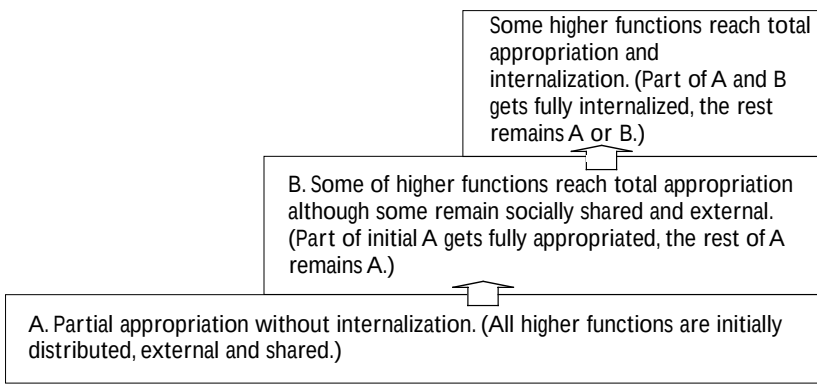


Figure 1.

Paradoxes of Distancing: Presences and Distances

At the same time as we attempt to uncover a psycho-eco-cultural perspective on distance, we have referred to two of the three dangers that threaten an exclusively mental view of the processes of distancing and mediation. The first was ending up without a body (Damasio, 1994), as we have attempted to underline with the postural analysis of the interiorization process; the second was ending up without a medium, without the actual physical fabric of distance, as we underlined on pointing out its situated nature in the second part of the analysis; and the third would be to end up without a soul, that is, to

reify human relationships (Kozulin, 1984), stripping them of social and moral intention.

The problem of mediational explanations is that instrumental and social mediations overlap very closely, so that as well as representing some things through mediations or representing the instrumental mediations themselves, we should represent the mediating others in those mediating processes. The mediation of mediations in complex and stepped structures appears to be the means by which we reach the diverse levels of meta-representation and consciousness of the actual mediation process. Besides those mediating means of an instrumental nature, Sigel (2002) includes as indicators and abilities in his construct both the meta-capacity for representing ourselves to others, and the mental states of those others. The capacity for distancing in his model is therefore a complex construction that includes, obviously, capacities for perceiving not only the object with distance, but also the symbols that represent it, the relationship between symbols and users, or between users and their situation.

The developmental relationships between cognitive distancing and social approach constitute a critical point of mediation models. For Vygotsky, Janet or Wallon, previous communality, the shared psyche in infancy, opens the way to individuality through the appropriation and interiorization of the provisions and artifacts of consciousness. There is a genetic primacy of 'us', from which there derives, in turn, the you and the I. We might say that first we communicate with one another, then we think; first we have dialogue, then monologue. Social proximity would provide the elements for achieving cognitive distancing.

Irving Sigel (2002), in this regard, appears to start out from a basic position: '. . . the basic paradigm is universal. The reason is obvious. Humans are unique individuals, separate physically one from the other' (p. 192). In this sense, he appears to situate the starting point of the capacity for distancing between non-socio-genetic theoretical models, based on previous separation or on distance, to move towards contact, so that shared mental states are seen as a point of arrival for individuals, and communicating with others requires building a bridge for contact. Throughout its development, the child would have to cope with social interactions and cognitive conflicts. First we exist and think, then we interact and communicate our thoughts and bump into cognitive disequilibrium (Piaget) or guided interaction (Vygotsky), which will lead us to the development of our intelligence.

The sensibility of researchers, and possibly the obstinacy of the facts, has led current psychology to define the processes of social action in

development in a convergent way (everyone now accepts their relevance); but the meaning of this convergence, its genetic interpretation, continues to be a point of conflict in explanations. Thus, the term for expressing communicative contact, as considered from a psychological perspective of primacy of the individual, is terminal (a final state at which we arrive from prior separation): inter-subjectivity. On the other hand, the terms used by Luria (sympraxic language), Wallon (symbiosis) or Unamuno (sympsychic) stress, using the Greek particle *sym*, the genetically primary nature of that which is shared.

In any case, the debate on the social origin of higher functions no longer appears to affect the acceptance of the social sharing of higher functions in adults. Parallel Distributed Processing (PDP) and connectionism have articulated their epistemic arguments via the route of engineering, employing the processing of machines, and demanding a 'society of the mind' for machines (to use Minsky's [1986] term); they have indirectly legitimized that which appeared most difficult to accept for many: the society of the mind for people. Our thinking appears to require, structurally, the capacity for co-thinking, for co-processing—between humans and machines, between machines and machines, and between humans and humans. I am confident that by pressing certain keys on my keyboard, the program of my word-processor or calculator will execute certain algorithms invisible to me, certain chains of action inserted in a modular way in my work, thus liberating me from a long intermediate process.

We have learned to trust in machines and in instrumental operators, and these can operate in PDP because we can program them to trust one another. But who programs human beings to trust in one another? Sociogenesis and social mediation (and with it, in a psychocultural perspective, the higher functions) are possible only in so far as there is an assumption of trust, of communality, whereby the members of a species trust in one another. The higher functions would have developed based on such a-rational trust, and building on this dependence or interdependence. Social mediation thus appears as the key to processing and as the pillar of distributed functioning mechanisms. The vision of human disability and weakness as a constriction that leads us to this powerful distributed model was introduced by Gehlen (1961) and has also been related to sociocultural theory (del Río, 1998).

The Limits of Social Distance: Virtual Others and the Paradox of Sentimental Distancing

Here emerges one of the problems in the development of the distance model: *distancing ourselves from others up to the point of mistrust*, up to

the point of bringing down the pillar of the trust algorithm, *could bring down the edifice of our higher functions*. We may become condemned, like computers, connected but incapable of recognizing one another and attributing legitimization and reliability. *Distancing can operate insofar as there exists reliability in mediations and a final reliance on others*. In other words, we can establish instrumental and social distances only to the extent that basic social contact and dependence are respected.

This point is far from trivial. Strong personal identity would emerge from strong developmental symbiosis and interiorization of the interaction with psychically rich others. Human psychic self-sufficiency would only be possible, if at all, in adults who were not self-sufficient in their genesis. The monologue of the mind as an interiorized dialogue, as conceived by Vygotsky (1982), would undoubtedly imply that the richness of the monologue will be genetically dependent upon the richness of conforming dialogues.

In this line of reasoning, the attachment required by the initial dependence and symbiosis of the baby would gradually become transformed, but would not disappear. The greater autonomy that physical maturity allows, with the entry into action of a strong interior self and well-assured interiorized company, permit us to deal with external distance from a strong framework of internal presence. In this light, autonomy is not solitude, but relies on interior company. In this sense, social distancing would only be possible to the extent that it is based on interiorized proximity and company. It is true, of course, that there may be abnormal developments, that there may be culturally provoked autisms in which the other is badly constructed, in which pro-sociality and empathy are affected by a structural deficit in the sympsychism. The pathologies of victimizers, incapable of empathy for their victims, reflect a psychic distance, but of a worrying kind: although they are physically close to the other, that other is psychically out of reach.

Research into how communications media and contemporary cultures affect psychological functions has highlighted certain potential dysfunctions in the current fabric of the new generations' directive and social mediations. It has been remarked that there has been a decrease in social and educational implication, in pro-sociality and in the capacity for self-analysis (del Río & Álvarez, in press; Fukuyama, 2000). These decreases may be related to the reduced availability and use of cultural tools for feelings, as well as to external psychotechniques for situating ourselves in points of view that permit us to see and feel others in an empathic way, or that permit us to see ourselves and feel ourselves in a distanced way. (The list of cultural

operators employed up to now is long: prayer and examination of conscience, confessors, psychoanalysts, consciousness groups, use of diaries, reading, social occasions and rituals for community discussion, etc.)

Research on distancing has in general been oriented more to the type of representational action aimed at mastering objective reality in a mediated way—to controlling objects more than subjects. But the distancing necessary for representational mastery over our understanding and action with regard to objects is quite different from that which we need for understanding and mastering ourselves, or for understanding and interacting with others. And, in fact, this second type of behaviour has often been considered to be a sub-category, albeit different, of the first type, in which instrumental theoretical thinking only changes some characteristics of the object and extends its theories to 'theories of mind'.

Human history offers us thousands of cultural designs that successfully integrate the two types of argument and intelligently articulate cognitive distancing and enactive and social fusion, distancing and presentiality. In every culture we find uses of social operators and operations, such as the Buddhist rituals cited by Ratner (2000) in Thai peasants; or the tradition of Hindu theatre, cited by Menon (2000); or the familiar mechanisms of Christian rituals, such as confession, communion or extreme unction; or animist artifacts, such as bones for drawing lots, or runes for making predictions, and thousands and thousands more that form part of current or primitive everyday life (such as the functions Vygotsky studied as 'vestigial'). The history of drama and literature frame them in a privileged setting, such as Greek drama or the complex dramatic allegories of life by Calderón de la Barca; or the mystic poetry of Saint John of the Cross. The characteristic common to all these 'directive' and sentimental mediations is that, on the one hand, they introduce a hiatus, an instrumental and cognitive mediation (a distance), in order to, on the other, at the same time cut it down and eliminate it, opening up new routes for activating emotions and making them more profound. We are faced with the cybernetic paradox of regulation achieved through the simultaneous management of approach in action and distancing in perception, or vice versa: a present distance or a distanced fusion.

Naturally, and as has occurred over the history of psychology, the mechanisms of representation and distancing have been analysed for the functions most legitimated by rationalism, and that we might consider most properly cognitive (perception, memory, reasoning, planning, etc.). Nevertheless, we should also apply these models to

volitional and executive processes ('directive' in Luria's terminology). From a functional perspective, all higher cognoscitive mechanisms are actually directive. It is action and intention that functionally guide the activity of the organism, and the 'cognitive' functions are integrated and subordinate to them. It is this instrumental nature of the cognitive functions that also makes it easier for us to instrumentalize them and analyse the processes of distancing and reflection in them, while it is more difficult to appreciate the distancing and mediation that act in our intentions and in our feelings.

But the cultural architecture of the distancing of our emotions (mediated and re-mediated and converted into feelings) and our intentions and postures towards reality (also mediated and converted into objectives, plans, attitudes, values, etc.) is equally powerful. Everyday life works because it is penetrated by them (del Río & Álvarez, 1994, 1995), and because of that we can supplement our instincts with the new cultural directivity. The arts, play, religion, animism, rituals (including those of scientists and academics), myths and life's narratives, self-analysis and criticism and social gossip—these are made for distancing not our ideas, but rather our intentions and feelings. The consideration of behaviour as a lesser problem than knowledge, or reducible to it, has led to undervaluing the analysis of the processes of construction (and distancing) of the higher directive functions. The powerful fabric of mediations for directive and affective distancing only partly belongs to the rationalist tradition of modernity, and for the same reason it is only partly included in scientific analysis. By deprecating its mechanisms (religious, popular, artistic) as primitive and unworthy of functional analysis from which to learn, we are perpetrating an epistemic annihilation of an essential part of our scientific object, a massive ablation in the cultural cortex under our microscope.

Utopia and Distance

Perhaps the most distant and open horizon of mediation is that which permits us to approach the future. And it is also that in which the cognitive and the intentional are combined in an inevitable and substantive way. A future human project has by definition a subject (be it individual or collective), so that it is not just a mechanical plan or project but a narrative. It implies, therefore, the distancing of perception in the concrete situation of the present, but also the anchoring of present projects in a distant and to-be-constructed space of future narrative. Once presentism has been transcended, humanity has the need to extend its presence backwards and forwards to virtual

contexts: towards the recognition of its identity, continually restructuring its past in order to appropriate cognitively and narratively, consciously, its present—towards reconstruction of its identity, imagining possibilities, exploring alternatives, and designing its possible futures; and threading together with the same thread that double movement of rewriting the past and writing the future. On understanding itself, creating itself and writing itself, humanity attempts to elaborate its best eugenesis.

In this sense, this distancing is not only perceptual but also creative: this 'cultural dream' (of the natural and moral sciences, of art and of religions) comes to constitute reality, and the human species embarks on the *mise-en-scène* of a work written by humanity itself. The Spaniard Acosta (1572 / 1962), at the beginning of the Modern Age, proposed the reorganization of the human sciences in order to enable the investigation of different minds or human models. This proposition was in the wake of the discovery that Spain's academics and intelligentsia had run aground, not so much on the shores of the Americas, but rather on the people of the Americas. The legitimacy of the new cultures was defended in the proposals for the rights of peoples, or Indian rights, developed in and around Salamanca University in the first half of the 16th century (Acosta, 1572 / 1962, 1576 / 1984; de las Casas, 1550 / 1967, 1545 / 1969; Vitoria, 1539 / 1967, see also 1991a, 1991b). The discovery of the Americas thus led to two great scientific questions: one, to discover the nature of the new lands, in which the European powers and natural scientists would be involved for four centuries; and the other, more interesting for psychology, to discover the nature of the new peoples and develop models for social and moral action in the new human scenario. Acosta thus established the distinction that would continue in Europe, between natural sciences and socio-moral sciences, and, despite extensively opening up the territory of the natural sciences, Acosta and the other figures of the Salamanca school attributed a clear primacy to the human and moral sciences in order to be able to understand other cultures and guide human, religious and political actions in this new intercultural world.

From then until now the social and scientific preponderance has been maintained by the natural sciences and technologies. While not always particularly appreciating the path followed by humanity as cultural and narrative construction, there are those that are actually writing that narrative and building its cultural framework. In the mediational perspective of a cultural genetics, the novel of human development is open and not completely subject to its genetic bases—or to genetic engineering for modifying it. It is also open to cultural heritage

and human designs for altering it. This confronts us in the new millennium with the problem of a distancing of the human sciences themselves and the question of whether it is possible for them to act in a similar way to the natural sciences. Just as the natural sciences must commit themselves in the face of their massive impact on the environment and genetics, so must the human sciences do the same in the face of their impact on the cultural environment and the higher psychic neo-formations.

It is the same challenge that thinkers and philosophers such as Calderón, Unamuno or Freire proposed: to write lucidly so that authors of novels and human models are conscious of their message. Cultural emergetism cannot refuse to accept the recurrence of its principal assumption: if culture writes us, we cannot decline to write culture, to write ourselves. We therefore find ourselves obliged, by action or omission, to use science, the novel or utopia as drafts of distancing to the future, as presentiments and conceptions for day-dreaming about our eugenesis, consciously assuming the 'willing suspension of disbelief (that the work is not absolutely faithful to the literal world)' (Cupchik, 2002, p. 179), that is, the imperfect and perfectable, mediated and generative nature of our truth.

Recapitulation

Let us summarize our reflection: Despite the fact that an idealist and dualist perspective has considered a weakness (belonging to our animal heritage), the organic, collective and external burden of our psychological functions, the imperfectibility of that which is human (dependence on others, the body, the environment), it is the condition and the very fabric of our new functional perfectibility. And that provides a wealth of advantages: it is what makes possible the distributed, distanced and at the same time situated and sympsychic nature of our new functions, whose potential we are only just now rediscovering.

Our species is defined by the ability for re-presentation, achieving through mediation the capacity for sympsychism and the distribution of our new functions. The two are supported by complementary and dialectical processes that permit the attainment of distancings and presences that transcend the natural concrete context. The unidimensional concern with cognitive development and the nostalgia for an angelic autonomization of our consciousness from its physical context could lead us to a biased judgement of the virtues of distancing. We believe that as much importance should be given to the affective and

directive mechanisms of distancing as to the cognitive ones. We also believe in the need for a positive re-evaluation of the situated character of distancing and the potential advantages of the topological and flexible nature of mediations for a more human understanding of culture. Furthermore, we feel that there should be greater commitment to cultural research on social, moral and emotional development, and a research that thoroughly explores the mechanism that is symmetrical and complementary to distancing: the rooting of our mental actions in affective relationships and contacts. This will undoubtedly enable us to re-evaluate the virtues of the cultural mechanisms historically developed for ensuring the presentiality of real or virtual others.

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