

Semiotics of Art Reception: In Between Semiotic Translation and Synesthetic Response

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Abstract

Humans — and artists — are capable of complex semiotic and experiential translations: we can translate reality, be it nature or culture, into an experience of sound, image, touch, smell, mime, emotion. We speak about ‘semiotic’ translation when we translate artistic work into another semiotic medium, when we translate the outer conditions of the experience — e.g. translating a novel into a movie, a painting into a song, a performance into a narrative. But before experiencing semiotic translation, humans experience ‘synesthetic’ translation, moving beyond different possibilities of inner responses towards an artistic setting: for example by way of feeling, smelling, or hearing what can be seen. One holistic perception of artistic expression can be transposed into different modes, each one enriching the other. Both translations originate in the human possibilities of multimodal experience (e.g. blending theory of Turner and Fauconnier), cognitive fluidity (Mythen 1998) — both theories referring to complex neurological responses. Since long, semiotics has analyzed translation on the level of the sign or sign system, neglecting the (neurological) origins/counterparts of these processes. This presentation will consider the importance of the human synesthetic possibilities and integrate these into a broader account of semiotic theory (Kress 1998, p76). It will analyse the complex experience of an artistic manifestation realized by way of an ‘outer’ and an ‘inner’ semiotic translation: at one hand an ‘outer’ complex comprehension which encompasses memory, cultural and aesthetic conventions, personal narratives, knowledge and expectations (Zeki & Lamb 1994), at the other hand the ‘inner’, rich synesthetic and multimodal cognitive and kinesthetic responses in body and brain acknowledged by recent neuropsychological and cognitive research (Spence 2001, Edelman & Tononi 2000, Thibault 2004).

1. INTRODUCTION: THE QUEST FOR UNIVERSAL TRANSLATION IN THE OUTER WORLD

Humans — and artists — are capable of complex semiotic and experiential translations. Every encounter with reality, every experience of sound, image, touch, smell, movement, be it from nature or culture, can and most of the time will be translated into a meaning, an understanding, an emotion. But every experience as such already implies some human transformation or creation, bound to our biological constitution and cultural context: an inner semiotic translation which backs up the outer semiotic translation. It is this last kind of translation or integration this article will consider: the inner cognitive and perceptual human means of meaning-making.

Since long, even before the advent of the discipline of semiotics, humans dreamed of a universal and complete translatability of different perceptions, intuitions, experiences, of ‘perfect’ translation between semiotic systems. In the 18th century, French intellectuals like Court de Gébelin, trying to complete an encyclopedia on world languages, claimed that all the senses can be expressed in language. A painter only reproduces visual perception, a musician is limited to the auditory, but language, even if it does not represent vision, touch or audition directly, can reflect these by offering different descriptions referring to a multiplicity of sensory feelings. Gébelin wanted to go even further, to find in the language itself the reason of its multiple sensory representations. This was his point of departure for writing a discourse on the origins of language. He broadened the limited phenomenon of onomatopoeia (sound-imitation of form or audition), to analyses of phonomimeticism, thus allowing language to go beyond the limitations of other semiotic systems, to find synesthetic correlations, to reproduce our experience of nature in all its sensory dimensions (Nye 2000: 142). The underlying supposed principle was that our senses can be readily ‘translated’ from one sense to another. As we will see not a bad idea, and a current idea in 18th century thoughts: the idea that art and nature were very near, were linked in some sense. But it was liable to their search for all art as a faithful ‘imitation’ of nature and less to an analysis of the biological, physiological or cognitive structures of the human being.

Today, language still is regarded by many as an ‘interlingua’, a ‘higher-order’ strand of semiotic systems, a resource for fusing information from different semiotic systems (Matthiesen 2001: 66). This means that language is considered as an overarching system or medium in which different semiotic systems can be expressed as well as an open field which can give birth to different perceptual sensations and semiotic representations. I indeed can describe a painting in language as well as I can have a visual impression of something I read.

Even if de Gébelin’s tentative failed, ending in quite esoteric thoughts about tarot and long dictionary lists of languages of the world, his presupposition remains interesting. The problems of outer translation are indeed still present. All artists, all translators, and even, on a daily basis and in different communication situations, all of us, are confronted with these problems when going from one semiotic system to another, when translating the outer conditions of an experience — e.g. translating a novel into a movie, a painting into a song, a performance into a narrative, a dialogue into gestures.

In a previous article, I remarked that, since long, semiotics has analyzed translation on the level of the sign or sign system, neglecting the origin of these processes (Coessens 2009).

There is an urgent need to consider the importance of the human synesthetic possibilities and integrate these into a broader account of semiotic theory: «*A new theory of semiotics will have to acknowledge and to account for the process of synaesthesia, the transduction of meaning from one semiotic mode in meaning into another semiotic mode, an activity constantly performed by the brain.*» (Kress 1998: 76). This article wants to make one step into that direction.

Indeed, many theories have analysed the problem of outer intersemiotic translation — between different sign systems. But what happens behind the apparent semiotic separation present in our cultural world, in our ways of conveying messages, in expressing ourselves by different ways or channels of communication, separating our senses, feelings, acts and thoughts following the availing semiotic categories? Can we find some underlying conditions? The inner semiotic processes in the brain are the subject of only quite recent research in cognitive and brain sciences but can offer interesting background to semioticians struggling with the problem of translation. My hypothesis offers a revision of de Gébelin's hypothesis, reconsidering the meaningful integration of different sensory spaces from a different angle, relying on recent cognitive, evolutionary, psychological and archeological research. But I will have to rely on the semiotic system of language to convey these thoughts.

2. EXPLANATIONS OF INNER SEMIOTIC TRANSLATION

Artefacts and symbols, meaning, translation and understanding in the world are but the external realisations of a complex inner semiotic translation that continuously takes place by way of the integration and interpretation of different sensory input in our brain and its collaboration through/with our body. Two lines of discourse starting in different domains — anthropologists, evolutionary theorists, cognitive scientists, psychologists — have offered interesting accounts of how humans developed this flexible ability of inner translation and external creation of material culture. The first line is rather cognitively directed and aims at an explanation of the creation of material culture, the second line is concerned with perceptual information and integration. Both insights offer a basis towards a tentative approach of inner semiotic translation, which then can explain the further interactions between outer material and symbolic tools and inner meaning-making processes.

2.1. Cognitive fluidity

On the level of ontogenetic development, the group-selection theory of Edelman points to the inherent flexibility of the human brain and its possibilities for adapting to outer conditions after birth: «*higher brain functions are mediated by developmental and somatic selection upon anatomical and functional variance occurring in each individual animal*» (Edelman 1989: xvii). For Edelman, the phylogenetically developed possibilities fit into the ontogenetic development and maturation of the human brain and nervous system. Otherwise said: culture fills in some of the possibilities of nature. The potential basis for organisation of and adaptation to the environment is the presence of numerous groups of cells in different parts of the brain that are variants of each other. As in many other mammals, a first selection of groups of neurons

takes place before birth. But in humans, a second, very important and intervening organisation and reorganisation of other groups of neurons, happens after the human being is in contact with the world. A first prenatal arrangement indeed is followed by a second or postnatal arrangement when the individual shows attitudes of observation and interaction. Further selection continues by the influence of the experiences, the contingencies of and exchanges with the environment. This clearly happens at a higher level than in other species and has a deep impact. This second neuronal selection guarantees potential organisation to the environment (Reeke & Edelman 1988). Thus a fundamental adaptation of the human body and brain to a relatively changing and polymorphic world can take place. This human ontogenetic development excludes models and structures that are strongly predetermined and ensures that every top-down pre-disposition, be it genetic, modular or other, is always tributary to bottom-up impact — cultural and human environment. Biological evolutionary flexibility makes cultural creativity possible (Coessens 2006).

Thus, even if the brain has some modular or very structured predispositions, there remains a lot of flexibility to adapt to different environments. But there is more.

Steve Mithen believes that modular parts of the brain became intertwined at a certain point of evolution. Searching for an explanation for the explosion of human culture between 60 000 and 30 000 years ago, he coined the notion of ‘cognitive fluidity’ as an important development for the human species (Mithen 1998). It meant the human possibility of escaping a purely biological, instinctive way of life. Cognitive fluidity is the capacity to integrate ways of thought and items of knowledge perviously restricted to isolated cognitive domains: «*modern human (...) minds will have a natural propensity to view materials from different perspectives.*» (Mithen 2005: 190). They made «*the transition from a domain-specific to a cognitively fluid mentality*» (Mithen 2006: 56). Mithen points to the fact that different domains as the social, the natural and the technical became intertwined as intercommunication between different autonomous mental modules started, fulfilling the need to process information about other social beings and their relationships.

Cognitive fluidity evolved from three acquisitions: a theory of mind, language and material culture. In the first place, humans possess a theory of mind. This means they have the capacity of intentionality: the «*ability to attribute a full range of mental states to other individuals as well as oneself, and then to use such attributions to predict and understand behavior.*» (Mithen 1998: 170). We will consider this point further when exploring the theory of mirror neurons. Secondly, by acquiring language and representational faculties, knowledge and intentionality could be shared, exchanged, tested and augmented and, as such, led to treasures of cultural knowledge which individual endeavour could never attain (Clark 1996: 206). Thirdly, material culture, as an extension of both mental and bodily capacities, increased information storage as well as creative interpretation and practical knowledge that could be used in different contexts by different individuals (Mithen 1998: 184). Cognitive fluidity, combining different ways of processing knowledge and using tools, is a domain-crossing capacity in which the human being can not only explore and transform, but as well cross and link elements and thoughts concerning social, material and natural worlds. As such, it is a very creative capacity, which acknowledges for crossroads between the real and the unreal and from which emerge new, imaginative and/or metaphysical meanings and worlds (Coessens 2009). The possible

mental translations and inputs from one domain to another, be it the social, the natural or the technological, enriched ways of being, behaving and meaning-making. This cognitive fluidity has become part of human ontogenetic and cultural development: from birth, children are surrounded with material and symbolic artefacts that are the result of as well as lead to cognitive fluidity — like dolls or bears.

Our world is filled with objects and artefacts full of meaning and creation, realised out of these human flexible potentialities. Human creation and its cognitive fluidity thus led to what is called by evolutionary theorists the ratchet effect. But, once launched in the world, artefacts seem to become independent, loose from their makers and as such leading to outer problems of translation.

The development of cognitive fluidity is an evolutionary step allowing flexibility of cross-modularity or multimodal integration. Cognitive fluidity developments as Mithen describes, are then realised in two domains of materialisation: in language and in material culture.

In linguistics, different authors point to the blend of different domains and inputs into creative sentences. Humans can dig out of two or more different source domains or cognitive spaces new outputs, with new meaning, thus creating a new cognitive space and new types of conscious thoughts. The cognitive blending theory, developed by Mark Turner and Gilles Fauconnier, accounts for the complex integration of distinct pre-existing conceptual input spaces into a single, new rich conceptual space (Turner 2006, Turner & Fauconnier 1995). By blending the concepts from different domains, more than just (re-)composition of this arises: new meaning emerges, an addition is made — a cognitive compression takes place and at the same time, meaning augments. New and dynamic meaning is constructed, relying on existing mental spaces with their own central and background meaning, but integrating these in a new way such that the integration gives rise to more than the sum of its parts. This happens in symbolical and meta-thought as well as in jokes or poetry. Verbal language as such seems to depend on the interaction between different domains, the flow from one cognitive space to another, realizing a new blended space.

But cognitive fluidity is also present in material creations. Andy Clark with his concept of scaffolding, and before him Popper with his exosomatic means, refer to the extra-ordinary integration of and interaction between human outer creations and inner thoughts and acts. Material culture, as an extension of both mental and bodily capacities, easily increases information storage as well as creative interpretation: *«the potential for the same item of material culture to generate multiple cognitive spaces (...) multiple meanings (...) interpreted differently by different individuals in different contexts.»* (Mithen 1998: 184).

These accounts of cognitive fluidity and the cognitive integration of different spaces in the mind already point to a flexibility in human minds of possible translations which apparently act more as a blending of different domains or inputs. The boundaries between the material and the symbolical, between thoughts and acts, between the outer and the inner are blurred, or at least become vague. Cognitive and embodied connotations easily arise as the result of new experiences. Metaphors are often understood without explicit explanation — at least in adults. As such, cultural and other stimuli for human beings not necessary imply unique or predefined responses, they lead to a horizon of possible interpretations and creations, linking together different cognitive spaces and material/symbolical domains.

But there is another part of experience which remains in the margins of these views, namely the enormous amount of sensory input, of the different perceptual modalities and their integration in the neuronal circuitry.

2.2 Sensory or synesthetic fluidity

Edelman's theory of group selection theory is also concerned with the sensory organisation and integration in the brain, as perceptual input is primordial in experience. Moreover, studies of impaired persons show that the human nervous system has an enormous plasticity and leaves open an immense potential of different functions. Nervous channels, suited for eyesight, are used by blind people for more accurate hearing and finger-reading. Young children under four can, after severe injury of parts of the brain, continue their normal development because other parts of the brain just take over tasks to avoid a loss of function (Gazzaniga et.al. 1998).

But haven't we all some propensity of sensory integration and translation, of transgressing the borders of our senses? Remember de G ebelin's quest of an interrelated sensorial space which would become clear by analysing language. How is it possible that we have an evocation of visual imagery when we read a book? How do we internalise the space and time as well as understand and feel the bodily impressions of the leading character? Why do we feel sad or emotioned looking at the picture of an unhappy child?

Let us start from Thibault's observations on what he calls 'connotative' non-linguistic semiotics (Thibault 2006). In his research, Thibault argues for a biologically and ecologically sustained view on semiotics. Apparently, humans are inherently able to find a solution to the problems of local coherence of a sign system. This solution can be found in the integration of and exchange between apparently separated perceptual, cognitive and corporeal spaces. Human meaning-making indeed needs a multimodal and embodied activity in which humans deploy a cooperative synergy of sensori-motor modalities: «*simulated inner movement cross-couples with other perceptual and semiotic modalities.*» (Thibault 2006: 82). Thibault presumes an integration of different levels of organization — neural, sensorimotor, biokinematic and expressive — into larger scale synergies. This integration is the result of the combination of at one hand perceptual, somatic and cognitive capacities together with the corporeal traces of previous social interaction — what he names the expression plane — and at the other hand the syntax and semantics of the socially developed semiotic system — the content plane of semiosis. Material and semiotic processes are always merged with complex and never wholly predictable meaning-making activity, be it socially acceptable translation or inner integration.

But let us look at the internal semiotic actions that precede the possible external interpretation of semiotic objects or events. The brain integrates different channels with their respective messages into coherent meaning. It partakes in the human effort to create a unified or stable experience of meaning in which patterns emerge, as meaning is impossible in a world which is chaotic and totally unpredictable.

Firstly, in cognitive science, there is growing evidence of multisensory integration in which «*the information processed by each of the sensory modalities — visual, auditory, somatosensory, vestibular, olfactory and gustatory — is highly susceptible to influences from the other senses*» (Calvert e.a. 2004, p243). Beneath the primary unique sense-related neuronal pathways,

there is evidence of multisensory areas containing mixtures of neurons. The best known site is the superior colliculus, containing convergence patterns in which all possible varieties of sensory neurons are maplike distributed. Electrophysiological studies show overlap of different convergence zones in the representations of visual, auditory and somatosensory space (Calvert e.a. 2004: 247). Multisensory neurons are involved in many different behavioral, perceptual and emotive processes, leading to a unified percept or experience of an event or object. These convergence zones and multisensory areas make it possible also to complete missing senses or add to senses. Our brain fills in the missing pieces, sometimes adds pieces. Human activity implies continuously intersensory and multisensory cooperation in the brain: *«Although the information arriving at the various sensory epithelia are initially processed independently, converging neural pathways rapidly lead to extensive multisensory integration in a variety of neural structures. (...) Given this extensive multisensory convergence it would make sense for our attentional mechanisms to be coordinated across the modalities as well.»* (Spence 2001: 231). Moreover, humans can transgress not only the borders of their own perceptions, but also, by doing this, transgress the borders of different worlds, as I mentioned with the capacity of cognitive fluidity, merging aspects of the social, the natural, the material, the living and the non-living.

As Merleau-Ponty wrote: *«Synaesthetic perception is the rule, and we are unaware of it only because scientific knowledge shifts the centre of gravity of experience, so that we have unlearned how to see, hear, and generally speaking, feel, in order to deduce, from our bodily organization and the world as the physicist conceives it, what we are to see, hear and feel.»* (Merleau-Ponty 1962: 229). Synesthesia is here considered as the multisensory horizon in which the different senses trigger each other, integrate on a neuronal level and unite in meaning-making activity. Adding meaning to the world will again augment the world of meaning. Thus, looking at a painting, humans can have the experience of walking around in the painting, of hearing noises coming from the painting, experiencing the feeling of the brushstrokes, and so on. This synergy which takes place in human experience, in the exchange between the human being and its environment, as a multi-modal input and arousal, makes movies so ‘moving’ and poignant, music so emotive, stories so tactile and visual (Coessens 2009).

But the activities of neuronal sensory integration go unnoticed by the perceiver, as long as there are no discrepancies between the senses. Moreover, by analysing and cognitively classifying our experiences, we often lose the awareness of a multisensory input and originally synesthetic experience in which a simultaneous emergence and intercommunication of the various perceptive and cognitive senses took place. By privileging the verbal in our analyses and descriptions, important and seemingly obvious embodied, perceptual and kinetic aspects of human experiences remain hidden for discourse and science.

Secondly, a very related system of integration is the mirror neuronal system. The mirror neuron system is a multisensory system as it integrates different sensory stimuli and converts these into sensorimotor representation (Pineda 2008: 46). Mirror neurons have the ability to remap other’s motor states onto the observer’s motor representations. This means that, being a pianist myself, seeing a pianist playing, the same neuronal zones will be activated as if I played myself. Hearing somebody being very sad will activate the same neuronal pathways and areas as when I am sad. As such, the mirror neuron system shows that multisensory neuronal

processes integrate also bio-kinematic and sensorimotor processes and realise a synesthetic link with corporeal traces or embodied memories of previous social and individual actions and interactions. The mirror neuron system also provides a cue for some basic intentionality, understanding what the other does, thinks, feels, even if it is as yet not clear how the human mirror neuron system sustains complex human cultural behavior.

3. COGNITIVE AND SENSORY FLUIDITY IN ART RECEPTION

Before experiencing semiotic translation, humans experience 'synesthetic' translation, moving beyond different possibilities of inner responses towards an artistic setting: for example by way of feeling, smelling, or hearing what can be seen. One holistic perception of artistic expression can be transposed into different modes, each one enriching the other. These translations originate in the human possibilities of multisensory integration and cognitive fluidity.

Artworks are results of cognitive fluidity, cultural artifacts and social triggers for broader experiences which encompass memory, cultural and aesthetic conventions, personal narratives, knowledge and expectations (Zeki & Lamb 1994). At the same time, artworks are embedded in personal, cultural, natural and material worlds. Cultural codes and spaces help us to enter this liminal space. By way of learned experience, humans have internalised material settings as the museum, the ritual of a performance, as important meaning-triggering spaces. They are outer social structures which afford for complex synesthetic inner dimensions of experiencing art in which the borders of different worlds and domains are continuously transgressed. The objects or settings of artistic creation contain latent perceptual and aesthetic stimuli and can intensify phenomenal experience. The receiver 'fills in', 'projects' an own metaphysical art-world of experience by a subjective meaningful rearrangement of cultural values and personal memories, narratives and embodied feeling, fetishism and spirituality. Encounters with art work or art manifestation thus realize situations of transgression, liminal experiences, sometimes against or despite the intentions of the artist, sometimes recognizing and absorbing traces of the artist.

My hypothesis then leads to the assumption that cognitive fluidity, and even more human sensory fluidity with its synesthetic and mirror aspects, play an important role in our confrontation with art, not only stimulating our habitual perceptions, but surpassing them. When encountering an artwork, the profane suddenly takes a sacred aspect: it is no more the pure object or manifestation we encounter — as it is in and for itself — but our experience of it. Something matters behind, beyond the matter, an addition or unknown depth to the material world, we, as human perceptual and meaning-making beings, add. A process of signification comes to the foreground, a process which reaches out across the frame, the form and the content of the representation, a potential force of opening intense situations. The setting and stimulation, inherent in the manifestation of the art object or subject, moves the receiver, offering intense emotional and aesthetic information.

The semiotic categories of the outer world and the inner integration of different sensorial and cognitive input should be looked at as complementary aspects of human understanding and

expression. The artwork apparently realizes a ‘resonance’, not experienced by other species. The dog will jump over the artwork or smell it, while the horse may recoil from it. Humans, however, by way of their synesthetic and multisensory capacities, are captured, moved by an artwork, and enter a situation of transgression, on the liminal regions of embodiment and cognition, of perception and language, reality and imagination, realising complex inner semiotic translations.

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