
BOOK REVIEW

Ariane Bazan: *Des fantômes dans la voix: Une hypothèse neuropsychanalytique sur la structure de l'inconscient.* Voix Psychanalytiques. Montreal: Ed. Liber, 2007. ISBN: 978-2-89578-136-3, 145pp., \$22.00

This is a dense and erudite book, one that will be of great interest to those who come to the neuropsychanalysis congresses—and to readers of neuroscience, who will recognize names such as LeDoux, Damasio, Panksepp, and especially Howard Shevrin (with whom Bazan worked in Ann Arbor, doing experiments in neuropsychology). One hopes that her book will soon be translated into English, offered to a larger public, and open to debate.

With Bazan's interest as a clinician in the Lacanian school of thought, this book will also be of great interest to those who are curious about how Lacan followed Freud and gave a tremendous emphasis to language. From the introduction to the conclusion, Bazan unravels her main hypothesis: that psychopathology is the pathology of the phantom, of the unspeakable but nevertheless transmitted signifier. Like the phantom limb, this signifier, although absent, is cathected with a drive, but its action (or rather, by analogy, its articulation) is blocked.

In her introduction, Bazan also mentions her broader philosophical viewpoint, citing mainly Merleau-Ponty; she hypothesizes a psychic apparatus belonging to an autonomous level or organization of the living, established through emergence at a biological level, and in reaction to a social context. Once in place, it cannot be linearly deduced from this biological level. Through this process of emergence, reversibility from one level to the next is lost, but the psyche enables one to interpret this divide, giving meaning to physiology. Regrettably, this idea is not developed elsewhere, although she does appear to follow Mark Solms's philosophical idea of dual-aspect monism. Indeed, in Bazan's short and dense book, which I will now try to summarize, physiology, language, and the psyche do seem to correspond seamlessly.

In the first chapter, "Affect and the Signifier", we learn that as Freud (1940 [1938]) wrote in his letter to Fliess on 29 December 1897 with a play on words—*Käfer*, the beetle/*Marienkäfer*, the patient's mother's name/*que faire?* what

should I do?—and from other such examples, it is the phonological form, not the semantics, that links the content of what is already repressed and what is attracted to the repressed. The same goes for dreams, she claims, which are riddles: dream images are a language structure put into images. As with the unconscious, torn between two dynamics, semantics and affect, LeDoux has also demonstrated the independence between the affective and the declarative content of the same material, the amygdala having an emotional memory mature before birth, long before the semantic memory of the neocortex. Therefore, an emotional conditioning would automatically stimulate a certain body tension, and an ambiguous phoneme can lead to false connections (as in *Käfer-que faire?*).

Chapter 2, "The Materials of the Psychic Apparatus," in its section on language, starts from Freud's (1891) work on aphasia. The motor images of a word are given by the kinesthetic return of the movement: the *Wortvorstellung*, the word representation, which is combined with the *Objektvorstellung*, the object representation. All this was put into question in 1915 by Freud, and even better later by Lacan and then by functional imaging: there is now a motor conception of the phoneme, its identity given by the wish of articulation (in Broca's area, of language) of the speaker. The material of perception is a review of Rizzolatti and Arbib's theory that monkeys' motor neurons have an equivalent in our Broca's area. The material of affect is primarily a review of Damasio's theory of emotion, the two separate times of e-motion, the first one automatic, which helps the organism's survival; the second one, feeling, where emotions become images represented at the level of neuronal maps. The body reacts with a motor mobilization called emotion to a stimulus. This sequence is similar to the perception of language: generally speaking, these two times are found in the perception of any movement, of the internal or the external body. Only the effectors are different. For the perception of linguistic movement, access to meaning goes through a motor-articulation event, which depends on voluntary muscles, decided on in the premotor cortex.

In Chapter 3, "The Linking between Affect and Signifier," a model comes to light: language, as heard through the mirror neurons, can activate the motor apparatus, which will follow two distinct paths: in the first subcortical level, the linguistic material will not be disambiguated. An affective tension inscribed in the emotional memory will be reactivated independently of context. In the second pathway, the neocortex, material is disambiguated according to context

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and is consciously understood. Only if the affective tension is important, will the subject be tempted to tie affect with present conscious context, leading to false connections. In this chapter, devoted to structuralism/linguistics, with authors such as Pierce, Deacon, and Saussure, we learn that we are a symbolic species, whereas animal language is iconic. Lacan, following Saussure, gave more importance to the signifier than to the sign. Deacon and Lacan agree: the meaning of the chain of signifiers is given by the relative position of signifiers. For Lacan, there is the pragmatic and the syntactic level of meaning production, but there is a third important level, the lexical level. In a symbolic system, as in human language, semantics comply with the mutual relationships between the system's elements. The signifier is what matters the most for meaning. Damasio and Caramazza have proven the existence of this distinction with the discovery of an anomic aphasia where patients cannot name the object but can tell its usage. Metaphors are possible only through this lexicon.

In Chapter 4, "The Dynamics of Disambiguation," we learn that according to Feiderici's neurophysiological model of the auditory treatment of sentences, all words are heard, all meanings understood: since words are not separated by pauses, each sentence can induce a multiplicity of hearings, and all give rise to the transient activation of their corresponding semantics. But all meanings but one are inhibited after 100 milliseconds, according to context. Bazan compares this mechanism to Freud's secondary or defensive repression as exposed by him and later by Lacan. This would be a normal, structural repression, which allows a normal functioning of the human psyche. It is a principle of the organization of human language. Only the left hemisphere inhibits incorrect meanings, too much so; the right hemisphere is the "poet," maintaining access to the ambiguity of language. Here, the idea of repression is reconsidered as the inhibition of language ambiguity, according to Gazzaniga's psycholinguistics model, and repression becomes a purely linguistic mechanism, resulting from a balance between the disambiguation by the left hemisphere and the maintenance of ambiguity or confusion by the right. (Psychoanalysts will challenge this and ask: what is pathological repression? What is the difference between repression and splitting, between neurosis and psychosis, etc?) Emotional activation, subcortical, can never be inhibited, even if desired (since during 100 milliseconds, all meanings of the phonemes are understood by the right hemisphere), so when the left hemisphere comes into play, inhibiting all meanings inappropriate to context, it has to give some meaning to this anxiety raised by the correct (unconscious) understanding by the right hemisphere, and it finds, consciously, "some way out", through rationalization: this would correspond to secondary repression according to Freud and Lacan, and it is a principle of organization of language. Pathological repression, according to this theory, takes place when affect linked to the signifier is such that, if freed, would unbalance somatic systems. Therefore, inhibition of the lexicon attached to this affect is blocked even if the subject wants to access it.

Chapter 5 presents a sensorimotor model of Freud's pri-

mary and secondary processes. These, along with the pleasure and reality principles, defined mainly in Freud's "Project" (1950 [1895]), have, as Bazan stresses, a mechanical definition, as does the ego. Inspired by Helmholtz's enactive theory of perception, Freud also thought that conscious perception was due to a message signaling the motor discharge. Since there is a hierarchical inhibition of the secondary process (seen as traveling through a dorsal pathway in the prefrontal cortex) on the primary process (traveling through a ventral pathway), Bazan agrees with Solms's hypothesis that Freud's ego, paralleled with the secondary process, also inhibitory, could have a neural correlate in the prefrontal cortex. As for the reality principle, Howard Shevrin thinks the role of consciousness is to distinguish the locus of origin of mental contents. This is exactly the role attributed to efferent copies: spatial access is a condition for conscious treatment, as it is the role of secondary process in the psychodynamic process. Only after the origin of the stimulus has been established can content be attributed to it, either by the ventral pathway in the sensorimotor model or by the primary process in the psychodynamic model. Here I would question that secondary process and the ego are completely conscious. For the secondary process, "We name these laws in their totality the *primary process*, in contrast to the *secondary process* which governs the course of events in the preconscious, in the ego" (Freud, 1940 [1938], p. 164). As for the ego, "*It is not true that everything belonging to the ego is conscious*" (pp. 95–96). The preconscious (never named in this book), or even the ego, is in great part unconscious, and can become conscious in analysis, but is not completely so. Bazan seems to say here that these different equivalents—the efferent copy, the secondary process, and the ego—are all conscious "structures". Quoting mainly early works of Freud—the "Project", his work on aphasia—does introduce a certain bias: Freud did change his mind, including on the topic of dreams.

Chapter 6, "Linguistic Action," homes back to language action, as can be understood from above. Psychodynamically, the secondary process inhibits language consciously, she says. Only in the dreams of psychotic patients—though also at the back of everybody's minds, as it appears in slips—do primary-process words, sentences, meaningful phonemes appear and speak unwillingly (this is Lacan's "*ça parle*"). Secondary-process language is symbolic, as Deacon suggests. It travels through the dorsal prefrontal cortex and exerts an inhibitory action on the ventral pathway and on the primary process. It is also spatial, which would be the role of grammar: to tell each word's place in a sentence, each phoneme's place in a word, etc.

Chapter 7, "Phantoms in the Voice," reveals Bazan's central hypothesis. Quoting Jeannerod and Ramachandran, she compares the former's idea of representation—which is a complete epistemological reversal of what has been thought until now: representation becomes a motor imagery due to an inhibition of voluntary movement; it appears in the gap between the intention to act and the act effected—and the latter's phantom limb; here there is a total inhibition, and, according to Ramachandran, the feeling of the phantom limb

is due to the efferent copy of the wish to move. Representation of movement is a ghost, a phantom, and so emerges where the sensorial return is structurally blocked, where it is impossible to bridge the gap between desire and deed. This is true for language, too. The unconscious and drives cannot be repressed, she says, only partially. Representations not allowed into consciousness are replaced by others, related to the former through their form. When there is repression, there is insistence of a cathected drive, on the one hand, and an inhibition to act out this drive, on the other. Since there is a disconnection between desire and deed, the insistence of the drive will bring forth a phantom that will take a motor form equivalent to the repressed motor form. In analogy to the phantom limb, in the case of a repressed conflict representation, the sustained desire to talk, without the ability to do so, will provoke an impression of presence or preoccupation through a motor image corresponding to the desire to talk or to act, and this is the motor phantom of the repressed representation.

Repression is therefore reformulated as the setting up of a structural gap between the wish to act and its realization. That the “return of the repressed” would be a structural quality of language must follow. I discuss below Bazan’s clinical case of F., who stumbled “by chance” on meaningful “ef” Phonemes. For a Freudian analyst, the fact that transference is never mentioned and indeed doesn’t seem important for Lacanian analysts is an issue, but I find it more important to mention her all-encompassing theory of the unconscious, as structured like a language (a French Lacanian analyst, Gérard Pommier, and others, may have arrived at similar conclusions, based on neuroscience; Pommier, 2004). If repression, physiologically, is a structural gap between desire and deed, then there would follow the emergence of a motor or phonemic phantom, which would psychically manifest itself through the occupation of the mental space by replacement representations, of words or of sequences of phonemes of the same form but of different semantics, usually completely different, but which cannot exhaust the conflictual drive.

Therefore, the Freudian dynamic unconscious, resulting from repression, manifests itself physiologically in the form of a network of tension fields created by a web of phonemic phantoms inherent to one individual. We all have in our history phonemes, or fragments of speech, whose energetic cathexis is very important. These expressions from early childhood, when their conditioning has a strong emotional valence, may have taken place without full understanding of the semantics, and they undergo a structural moderation—that is, a structural gap prevents their proprioceptive return from provoking an affective shock when they enter consciousness. These fragments might provoke the emergence of phonemic phantoms, whose trace, the return of the repressed, can be heard in clinical work. These are the symptom words, or, for Lacan, “master signifiers.”

In her “Introduction & Conclusion,” Bazan mentions her belief in a philosophical position: she can only present as a

metaphor her mathematical idea of phantom phonemic attractors of psychic energy in the individual’s action space, coming from early childhood, organizing the unconscious. The other important issue here is the kind of communication taking place between patient and analyst. It seems that Bazan is looking for slips in the patient’s discourse that would indeed lead to early childhood sequences of phonemes, as she says in her clinical case of F. I was surprised, reading this case, when I came to the last sentence: “Indeed, after tripping many times (on different words in ‘ef’, mainly in Flemish), the articulatory series in ‘ef’ finally ended, and in the following sessions, some existential issues could be explored.” This is where I would have started. F. had a psychotic breakdown and may never have ended on the analytic couch. But had F., with an analyst using his transference and countertransference (in Bazan’s introduction, you find figments of her motivation, not her countertransference, since Lacanians follow Freud’s early work and ideas and think countertransference should be controlled), there would be a subtle difference between interactive and imaginary communication. According to Widlöcher (1986), “The act of speech is indeed to be distinguished from the act of language. The former is defined as the materiality of the event. The latter is defined by the intentionality of the message, i.e. the meaning it conveys according to the conditions of its emission. Psychoanalytic communication has as effect to describe the motivation of the act of speech through the intention of the act of language. It is the absence of answer to the information (given by the patient) or to the interaction, but mainly to the interpretation (given by the analyst) which confers a meaning to the act of speech and changes it into an intentional act” (pp. 30, 32).

It is clear from my review that I admire Bazan’s work. I hope I have succeeded both in conveying what she has tried to demonstrate in her very rich work and also in giving some idea of Lacanian psychoanalytic thinking, with which I disagree. It seems, though, that through its stress on linguistics and mathematics, it can help shed some light on the functioning of the brain.

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