

Ferreiro stated: "Writing requires children to draw letters and also to be aware of the fact that what is said can be written".

Writing is shaped in a space where language finds a place to make itself visible. Strokes are unique and have the ability to be multiple. Once letters are part of a person, they never leave them.³

Writing is understood as a cognitive process, a set of intellectual processes conducted by the author while producing a text. Even though authors do not transform the world (although some believe they do), they are capable of transforming themselves; during such transformation, they also transform how they conceive it.⁴

Pescetti, a well-known children's book author, said that writing "allows life to be told just as it is, or as we would like it to be. We may tell stories that we loved, or stories that we hated, and we tell them not to feel alone. A horrible day, or a wonderful day, depending on what we are about to tell."

For this reason, as Pescetti said, offering children a pencil is like giving them "a magic

wand, the baton of an orchestra conductor, or a small lightning rod."⁶ ■

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Symbols and their therapeutic role: Looking for scientific grounds

The history of science and technology has frequently demonstrated that certain knowledge which had been considered highly prestigious in ancient times, was then dismissed and forgotten, to be finally rediscovered or assigned a new relevance at a later time.¹

In this regard, a long time before the embryonic forms of modern medicine became established, such as the theory of the four humors (fifth century B.C.-fifteenth century A.D.), and iatromechanics and iatrochemistry (sixteenth-seventeenth century), patient care was based on what is known today as primitivist medicine, which utilized magical thinking and the clinical impact of symbolic effectiveness.²

Anthropologist Levi-Strauss stated that the effectiveness of symbols refers to the phenomenon whereby a person, story or image acquires, at a certain time, the category of a symbol, and from that moment on it becomes an instrument utilized to assign a mysterious sense to an event in a

person's life, and as of this moment, such element (symbol) carries on transformations in real life.^{3,4}

However, for symbolic effectiveness to be materialized, the symbol should function within a support reference system, i.e., within a collective group that believes and has faith in it. A paradigmatic example of this is that of the shaman or witch doctor. Sick people place all their hopes in the shaman's alleged magical power, a phenomenon that the shaman reinforces by displaying symbol-rich and ritualistic aesthetics, masked by his/her garb, gestures and the repetitive rhythm of his/her chant, dancing, and music instruments.⁵ As it happens, this reminds us of the role of symbols in today's office visits, as pointed out by Balint, who coined the concept that a physician's presence is therapeutic itself.⁶

In addition, it is worth noting that we access the world (inner and outer) indirectly, i.e., through representations, either symbolic (images) or signic (words), bringing order and coherence

to our perceptions in a process that dispels the actual uncertainties of the world. During this process of interpretation, what can be explained (logics) is represented by words (signs) while what cannot be explained (irrationality) becomes interpreted (represented) through symbols.^{7,8} For this reason, Lluís Duch, who has worked in the “inevitability of symbolization in human existence”, has constantly referred to “the work of the symbol” and the fact that any social construct of reality necessarily presupposes a symbolic devising.⁹

It is worth noting that such interpretation of the world through representations not only occurs in the mental plane, by means of symbols and words but also in the cellular plane, by means of chemical signals, such as cytokines, hormones, second messengers, etc., giving rise to what is known as biosemiotics.¹⁰ So it turns out that symbols, signs, and mediators are bridges that connect the inner and the outer world with our organicity; symbols specifically, given their comprehensive nature, might be responsible for connecting mental language with cellular language. Decoding how such inter-plane semiotics works may be comparable to having decoded the Rosetta Stone of body language, and would allow us to explain, among other things, how placebo, reliability, and faith contribute to healing.

However, given that drugs neither work magically nor create functions, but modulate (stimulate or inhibit) normal bodily functions, and that, as mentioned above, symbols echo on bodily functions, it would be interesting to investigate which neurological, endocrine and/or immune circuits are used in such echoing process so as to take advantage of their therapeutic potential, as we do currently with drugs. We may ponder on the fact that a therapeutic use of symbols, certainly based on scientific grounds, might be useful as adjunct therapy in addition to drugs, and help to reduce common complications resulting from polypharmacy, atopy, toxicity, and other adverse effects.

Even though yet much more is to be learned and discovered in relation to this line of research, investigations would not start from scratch; in addition to the millennial empirical experience passed on by folk medicine from different times and regions, we now have some scientific evidence available, for example:

- Just like modern neurobiology has demonstrated that animals have different shape and color patterns, known as *sensory primitives*, capable of inducing them to adopt certain behaviors, it has been proposed that human beings also have a neurological, hormonal, and immune response to certain sensory stimuli, known as symbolic primitives.¹¹
- Neurophysiological studies have demonstrated that there is a close connection between bodily cycles, nerve centers, and symbolic representations. Technological development is an example of the path that takes us from biological reflection to cultural effect while symbolic effectiveness may go the opposite way.¹²

To sum up, future scientific studies are essential to assess how symbolic effectiveness works so that we are capable of manipulating it therapeutically. ■

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