# THE AFTERTHOUGHT OF SPEECH LANGUAGE AND HEARING SCIENCE THERAPY IN THE CONTEMPORARY SCIENTIFIC EPISTEMOLOGY

## O repensar da Fonoaudiologia na epistemologia científica contemporânea

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### **ABSTRACT**

**Purpose:** reflecting about the political force of speech language pathologist in the contemporary time. **Methods**: two models of scientific epistemology are introduced focusing on the speech language pathologist, namely: the classic scientific acting and the contemporary scientific acting. **Conclusion**: the speech language pathologist exercises the political autonomy of its knowledge, put into context in the health area, disposing of her, since the speech language pathologist formation, until effectively its professional's practice.

KEYWORDS: Speech, Language and Hearing Sciences; Knowledge; Science

### INTRODUCTION

Against the feeling of uncertainty towards reality and from the deep fear before uncontrollable real possibilities, scientific truth came out. We are unable to support a world ruled under unforeseeable circumstances and dominated by unprecedented vital settings. It was necessary, the classic science as a means of setting up some need in this fruit of chance and provide the breakup of the unpredicted. Around the centuries XVI/XVII thru XIX/XX, science has helped us in our privations and turn the existence into bearable by producing a safe illusion.

Evaluating our reinterpretation of the world, we find that disaster of modernity, which gave shape to such classic scientific knowledge, was that one who reduced all introspective and interpretive expertise to empirical outwardness. The attempt made by us today is to reintroduce the interpretation in the structure and the very fabric of life, wanting to raise the interior and interpretative ways of knowledge.

Conflict of interest: non-existent

Before such scenario, today we live in the time of a paradigmatic crisis, highlighted especially in the society by the actions of its employees who can no longer dodge themselves from anomalies that subvert scientific practice, leading the professions to a new set of commitments, a new basis for the practice of science. Here lies a new moment to rethink the Speech and Hearing Therapy, in its marches and counter-marches, it wants to assure not only their political and social legitimacy, but also wants to know the worth of a systemic perspective.

The classical model of science and speech therapy

The classical model of science puts for the scientist all of that is before him, all that stands opposite to the subject. It is the radical exteriority between subject and object, which are, thereafter, taken as two different entities by nature and intrinsically separate. It calls forth here the paradigm formulated by Descartes, prescribing the logical relationship of the disjunction. On one hand, the world of objects submitted to remarks, experiments, manipulations, and on the other, the subjects' world who wonders about communication problems of existence and consciousness.

The framework that governs the model is given as a capacity that man has to extract from nature the logical order, that he, while human being,

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represents the formal language of his intellection. It is the human impudence that dares to tell the world lies in the expression of their ability to think; For this particular reason the exact sciences are justified. since they result from the rational logic, create an array of ideas that can close a principle of proper and precise truths. This type of transcription made by the Cartesian science's man, corresponds to the map of reality, in which it is deduced the territory that stands before him. If there is a relationship between the map and the territory, it does not matter anymore, since the abstract logic of this representation ensures mechanical, determined and formal reading of the world.

Intelligence becomes splitted, compartmentalized, mechanistic, reductionist and disjunctive, advancing to the knowledge of the parties, since its method consists of "splitting up every trouble to be examined into as many parts as possible and necessary to solve them" 1. The subject is in front of the mechanical movement in the world, the analytical attitude, which keeps him out, to exercise the power of domination that this single reading grants him, by breaking down to dissect the complexity that presents itself, translating it into the formality of quantitative and measurable knowledge, proper from the math language: the cartesian synthesis.

See how clashes such a proposal still drags our days. Scientists, guided by the principle of regulatory certainty of living organisms, have to admit that bodies are nothing but fabulous machines - life is essentially mechanistic: biology is the parameter of a worldview.

The reductionist fallacy proposed here requires a human condition which we resent, because many of our pathologies were generated by the division of man into physical being (natural) and thinking being that, in the shape of a self, installs himself as a mechanical, autonomous and independent body.

Likewise, along with scientific revolutions, economic, social, political revolutions aimed at achieving change prohibited by these same institutions that want to change. Insofar as the crisis will be deepened, many individuals undertake concrete actions in projects for social reorganization before another institutional structure.

In Speech language and hearing sciences, we see that in the striving to secure his space, the professional, political and social confrontations take the scenario of revolution generated by the scientific review of your own knowing.

By proposing to the reason the desire to seize and control the object of reality, the Cartesian paradigm has serious questions for speech therapy. How many users are penalized by poor knowledge of tax and public agencies before the competency of the speech therapist. The doctor's look endorses such ignorance by assigning him, often a highly technical function. And the technical activity is entangled not only by the bias mechanism, but mostly measurable. where the patient is being examined, objectively, only as quantitative data. Such technical survey let us reason together for themselves the condition of accurate data, which exempts the subjective participation of either party, stipulates the condition of accurate proposals, objective, neutral and universal, postulated that the Cartesian paradigm offers at the time of doing disjunction between subject and object analyzed, even though this object is represented in the figure of the patient.

Today, such questions lead the speech language and hearing science to critical inquiry into the strength of the real to the reason. It comprehends that reality overflows on all sides of our mental structures. Brings for itself that goal of knowledge is open and not to impeach the dialogue, in a relationship guided primarily among subjects and not a disjunctive relationship where the therapist is put in the position of a simple body - object, soliloquizing about indexes and accurate figures. The role of awareness for this reader of body-object only represents the place of intelligence. And where is placed what he could not understand, hence We ask. And what was not stuck in the linguistic sign? The world there was the exact size of the capacity of their mental representation.

A critical view of contemporary science in Speech Therapy

The first three decades of the twentieth century have radically changed the classical scientific view through significant discoveries in physics, culminating in the theory of relativity and quantum theory. Notions as absolute space and time, elementary solid particles, the fundamental material substance. strictly causal nature of physical phenomenon and objective description of nature, purging any intrusion of the subject participation and construction of the world, these are notions and concepts that could not be extended to new areas where the physics used to penetrate.

As of such revolutionary changes in our concepts of reality, caused by modern physics, a new world view begins to emerge.

The great achievement of scientists of the new age, as Heisenberg, was to express the limitations of classical concepts, introducing concepts like the uncertainty principle, the principle of complementarity, the subatomic perspective and the matter of likelihood of interconnections.

The systems comprise the new conception of the world as a whole integration. Instead of focusing on the elements or basic substances, the systems approach emphasizes basic principles of organization and procedural interrelation. While we may admit individual parts in any system, the nature of the whole is always different from the mere sum of its parts. It is the emphasis, especially in relations to the detriment of individual entities, realizing that such relationships are inherently dynamic. It is the focus of thought resized to procedural case.

We reiterate that the reductionist description can be useful and even necessary. It only becomes dangerous when translated as a complete explanation. Reductionism and relational view, analysis and synthesis are complementary approaches that used in balance, help to obtain a deeper understanding.

Nature refuses to express itself in the language that the paradigmatic rules of classical science suppose, then, the crisis blows up with so much force as was blind trust. The new paradigm was set free from a fascination that represented the closed thing as rationality, knowledge as being in the process of finishing. Henceforth be founded unpredictability dialogue with an open world to which we belong and in whose construction we cooperate.

This new paradigm offers to the speech language and hearing science that is not the principle of completeness, but the incompleteness of knowledge. Highlights the professional multidimensionality, striving against the political hegemony of knowledge that cripples the understanding that man is at the same time, physical, biological, social, cultural, psychological and spiritual.

Understanding the crisis of sealed, clear, measurable and signs as separate concepts of truth, the speech therapy admits, then, ambiguity, dealing with uncertainty, raises the probability and installs network connections and see the difficulty of demarcation on the man as well as the medium that surrounds him. When your knowledge is obtained at the level of manipulation, ie, when the relationships and the difficulties of a patient fits only in the logic of those who examines, settle down the relationship of intervention and experimentation.

However, It is increasingly evident to the audiologist today that knowledge surpass the technique manipulation for the sense of understanding, in which the observer integrates the observation of the patient and eventually admit that there will always be an unscientific core in any scientific theory.

The fundamental feature of quantum theory, resonates the query that the observer is essential not only to the properties of a phenomenon to be observed, but also to bring about these properties. In the new physics, it cannot be kept the Cartesian division between mind and matter, between the observed and the observer. We can never talk something or about something without simultaneously talking about ourselves.

In line with these principles. We see the new look of the speech language and hearing science revisiting itself because the speech therapist by performing this kind of catharsis, restores its action on inter-subjectivity. It is a new practice where patient and speech therapist through common experience open up a range of mutual possibilities, setting the reciprocal act of the building on the therapeutic relationship.

In affirming the critical attitude of the speech therapist, in the complexity of the current knowledge, i.e., literally " complexus " in Latin, which means what is woven together, the speech therapist has for himself the extent of multilateral looks, dwindling away with other knowledge, not only with the intention of preventing global health, but also provides with the knowledge network, the effective therapeutic measure for convergent actions with other professionals.

Amidst the Cartesian model's dictatorship and the strand coming from the paradigm originated from the principle of the complexity of knowledge, the speech therapy opens up a dialogue with herself. Born between paradigms, engages dialogue with the contradiction. Thinking about its genesis, in the compass of what is and what ought to be as asserts. requires the reporting and announcement of a new approach to the political strength of their knowledge.

With the character of epistemological revision, there is the consequent resettlement political power of knowledge in cooperative relations, undoing the verticality of knowledge about each other. Resets as ripened fruit of the new logic, the paradigm of a general nature, the congregating power, the organization that recovers the look of marginal biases as integrators of a plural action. It is the attitude, whether social, political, scientific, arguing that the legitimacy of Speech Therapy, incorporates the model of inclusion and rewiring of knowledge.

The new knowledge as a network without basic foundations, leads immediately to the question: if everything is interconnected with everything, how can you understand anything? And this question is imposed to the contemporary man's sense of caution against the approximate knowledge, setting him free from Cartesian scientific knowledge. This challenge leads to the resignation of the myth of original possession of the truth, but encourages us towards the only possible path of truth - that our knowledge is the eternal and endless dialogue with the world caught in housing as a way due to our rationality.

With this awareness is that we see the constant attitude of the Universities, following the guidance of the Speech Therapy Board of Ethics, implementing and modifying the curriculums, since the profession regulations of speech-language pathologist in 1981, aiming to drive the axis of the academic training to the demands of social process.

The ordinance 302, April 7, 1998, CNE - National Education Council, exemplifies this concern when it states that:

It was proposed a wide graduation, fundamental to the generalist speech therapist, which also has operations in speech — language evaluation and therapy, that enable himself to act on preventive action, aimed at the collective population, integrating teaching and research (...). Understanding that communication is influenced by biological, social , cultural and educational factors , the formation of the speech-therapist should provide knowledge and experience in multiple areas sufficient for the profession " <sup>2</sup> degree .

Still tweaking the ever less technical and mechanistic sense, arduous striving in 2001, through the CNE Curriculum Guidelines, redefines another graduation proposal fundamentally comprehensive for the speech therapist:

The speech-language actions must consider the history of life of the subjects for which they are facing and their situation in relation to its socio cultural context. Therefore, it is not just to aggregate content into a new curriculum, but to take this opportunity to build new curriculum guidelines, which are linked in an inseparable way, scientific and philosophical rigor, technical competence, social sensitivity, and ethical / political stance as condition to perform any action audiologist.

The general education required by new guidelines, aligns itself in essence, with the effective interaction in all health practices. This re-look ensures the reframe on the Cartesian paradigm of analysis (distance operation) and from disjunction of A over B, replenishing the certainty that autonomy of each knowledge (whether political or epistemological) is only effective in a real joint action. Working in joint actions, speech therapists recognize the multidimensional phenomenon, understanding that the

knowledge of the parties depends on the knowledge of the whole, and that this is reciprocally articulated to the parties. Sets up the professionals network that replace a thought that isolates and segregates, by another that distinguishes and unites. By uniting the thought, the measurement relationship of quantitative gets lost in the name of acting forces in the parts that change qualitatively in the right moment of their interactions.

#### CONCLUSION

Indeed, the «accurate» sciences have today, by function, leaving the laboratories. It can no longer forget the social and historical roots that assumes a concrete situation. Merleau - Ponty had already stressed this urge to think of what he called " the true status ":

"While I keep in my possession the ideal of an absolute spectator, without a knowledge point of view, I cannot see my situation but a principle of error. But if I recognized that I am inserted in every action.... so my contact is revealed as the point of origin of all truth, including the science ... nothing left to do unless to define a truth in the situation. "3"

So there it is the current model of speech therapy, which focuses on the health condition, which can never be purely quantified, but admitted as a state of relational well-being. It is a systemic concept, as requested by the continuous movement of cases, interweaves the man in all instances of his well-being in the world.

This is the time of speech therapy that in the 80s, had their recognition consistent with new scientific logic. This is the time of speech therapy that revisiting the knowledge of other sciences, applied its assent in the area of health sciences.

It is the science proposal, technology and rehumanized technology, which proposes how the Speech Language and Hearing Science proposes as a link to the diagnosis, to prosthetics, therapy and prophylaxis, the interaction of the individual in the fullest form of emotional, psychological and social health.

### **RESUMO**

Objetivo: refletir sobre a forca política do saber da Fonoaudiologia na contemporaneidade. Métodos: são apresentados os dois modelos da epistemologia científica, neles focando a Fonoaudiologia, a saber: o fazer científico clássico e o fazer científico contemporâneo. Conclusão: a Fonoaudiologia exerce a autonomia política do seu saber, contextualizada na área da saúde, dela dispondo, desde a formação do fonoaudiólogo, até, efetivamente, a prática dos seus profissionais.

DESCRITORES: Fonoaudiologia; Epistemologia; Ciência

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