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LINGUISTIC PRAGMATISM IN DEWEY: A UNIFIED CONCEPTION OF MIND, THOUGHT AND LANGUAGE

Jorge Francisco da Silva

Doutorando em Ciências da Linguagem pela Universidade Católica de Pernambuco
linking@uol.com.br

Karl Heinz Efken

Universidade Católica de Pernambuco
khefken@hotmail.com

Abstract: According to Stout (2002), Peirce invented pragmatism, James united the world of human experience and that of language and Dewey transformed pragmatism into an instrument of social, cultural progress and democratic awareness. This article analyses the views of language in Dewey and establishes their links with key concepts within his instrumental pragmatism. We begin by examining his theory of language that brings together the concepts of thought and language and explores the body as the origin of meaning. We analyse his conceptions of communicative action and highlight the role of language in the development of his theory of investigation. Finally, we appreciate the connections between his concept of warranted assertibility, social responsibility and the ethical implications of discourse.

Keywords: Mind. Thought and language. Theory of investigation. *Warranted assertibility*.

PRAGMATISMO LINGUÍSTICO EM DEWEY: UMA CONCEPÇÃO UNIFICADA DE MENTE, PENSAMENTO E LINGUAGEM

Resumo: Segundo Stout (2002), Peirce inventou o pragmatismo, James uniu o mundo da experiência humana e o da linguagem e Dewey transformou o pragmatismo em um instrumento de progresso social, cultural e de conscientização democrática. Este artigo tem como objetivo analisar as visões de linguagem em Dewey e estabelecer suas ligações com conceitos-chaves dentro de seu pragmatismo instrumental. Iniciamos pelo exame de sua teoria de linguagem que reúne os conceitos de pensamento e linguagem e explora o corpo como sede dos significados dos primeiros. Analisamos suas concepções sobre ação comunicativa e destacamos o papel da linguagem no desenvolvimento de sua teoria de investigação. Finalmente, apreciamos as conexões entre seu conceito de warranted assertibility (discursos justificáveis), responsabilidade social e as implicações éticas do discurso.

Palavras-chave: Mente. Pensamento e linguagem. Teoria de investigação. *Warranted assertibility*.

First considerations

Charles Sanders Peirce (1839 - 1914), William James (1842 - 1910), together with John Dewey (1859 - 1952) were the founders of Pragmatism. This philosophical movement began in the early 1870s at a short-lived club called *The Metaphysical Club*¹, where pragmatic orientations on various issues began to take shape.

Their main stand was a reaction to the philosophical ideologies prevalent in the 19th century, with their metaphysical excesses and very abstract conceptions about truth and reality. Peirce, James and Dewey felt the need to refute Cartesian anti-foundationalism and to reform or naturalise concepts such as Kant's *normative reason* and Hegel's *historicism*. Thus they developed pragmatism as a philosophy of practice and engagement with issues of real importance for the routines of life.

Classical American pragmatists believed that knowledge is only meaningful when associated with action. Nothing is true or false in itself, there are no absolute truths. This philosophy deeply rooted in the realities of life is primarily concerned with the individual's direct experience and his relations with his environments. In essence, discussions and investigations must be conducted in order to produce knowledge of practical application.

In addition to philosophical re-reading, pragmatic naturalism was shaped by the best science of the late 19th century. The main contributions came from Darwin's theory of evolution² and the statistical sciences³. Evolutionary and statistical explanations differ from the mathematical and physical accounts of reality expressed in the Newtonian model based on necessity and universal laws. Natural selection and statistics can explain contingent events, presenting conditions under which they can be viewed, not as absolutes, but as at least probable. Such theories proved to be more adequate to explain social phenomena, the emergence of the collective from the individual and the processes through which biological species arise and diversify.

Peirce, James and, above all, Dewey recognised that evolution at the level of species and learning at the level of individuals share a common selective structure governed by adaptation processes in which the interaction with the environment preserves, reproduces and selects some elements while others are eliminated.

In *Experience and Nature* (1929), Dewey argues that everything that is known or knowable exists in relation to other things and therefore there are no absolute values. At the level of human life, our ability to communicate, which Dewey considers "the most wonderful of all affairs" (DEWEY, 1929, p. 166), is what generates the meanings that makes natural events transcend their existence as mere occurrences and turn into events full of implications.

¹ See MENAND, Louis. *The Metaphysical Club, a story of ideas in America*. Harper Collins Publishers. New York, 2001.

² Dewey was born in 1859, the year Darwin's *On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life* was published.

³ The Gauss-Laplace synthesis is regarded as one of the major milestones in the history of science, and it became a staple in astronomy and other physical sciences by the mid-1800s. It took until about 1900 before it had fully diffused into other scientific disciplines. (<https://www.amstat.org/ASA/History-of-Statistics.aspx>)

Dewey (1929) anticipates for more than two decades some of the central ideas proposed by the second Wittgenstein during the 1940s and 1950s. Dewey was the first to reject the possibility of a private language and to define language as instrumental and its meaning as contextual and to treat the universals in terms of what Wittgenstein would later call “family resemblances”⁴.

In this essay we deal specifically with that pragmatic-linguistic turn in Dewey and examine, in particular, how his conceptions of language permeate and inform his instrumental pragmatism.

A Unified Conception of Mind, Thought and Language

According to Johnson (2010), Dewey developed his vision of mind, thought and language in a continuous dialogue with the biological and psychological sciences of his time, half a century before the term *cognitive sciences* emerged. Dewey relied on empirical research in several fields, including biology, neuroscience, anthropology, cognitive psychology, developmental psychology, social psychology and linguistics.

Dewey's approach, therefore, offers a model of how philosophy and cognitive sciences can work productively together. Whilst the sciences reveal aspects of the deeper functions of the mind, philosophy assesses the underlying assumptions and methods of the sciences and places empirical research on cognition in its broadest human context, in order to determine to what extent scientific advances can affect our lives.

Johnson (2010) defines Dewey's theory of mind as naturalistic, non-reductive and process-oriented. His view is naturalistic in that it employs empirical research drawn from various natural and social sciences, avoids abstract explanations and rejects ideas about a non-empirical ego or about pure rationality⁵.

However, although Dewey has appropriated scientific modes of investigation, he has taken great care to avoid the reductionist tendencies that limit the explanatory scope of certain sciences. His account is, therefore, non-reductionist because he concluded that no scientific report, no set of scientific perspectives or philosophical orientation in particular have the power to find answers to all questions.

Consequently, Dewey insisted on a plurality⁶ of methods from various sciences, recognised multiple levels of explanation for mental phenomena and used art and aesthetic experience to reveal the depths of human experience and understanding. His vision is guided by the process in that he always considers experience and thought as continuous processes of interaction between the organism and its environment. Dewey does not treat cognitive functions as distinct faculties and never transforms dynamic cognitive processes into fixed structures.

⁴ See WITTGENSTEIN, Ludwig. *Philosophical Investigations*. Basil Blackwell, Oxford. § 67, 1953, p. 58.

⁵ *Anticartesianism* is one of the central themes of Pragmatism. Dewey rejects the separation between mind and body proposed by Descartes.

⁶ *Pluralism* is another central theme of Pragmatism. This is Dewey's answer to those who preach final and absolute truths.

The concept of experience is the most important notion in Dewey's thinking because it includes everything that happens - both on the side of the living organism and on the side of the complex environments with which this organic creature is continuously interacting. Experience "includes what men do and suffer, how they fight, love, believe and support, and also how they act and are influenced ... that is, the processes of experimentation" (DEWEY. 1929, p. 8).

Johnson (2010) describes one of the main concepts in Dewey's thinking: the principle of continuity⁷. This principle is used by Dewey to explain the integration of mind, thought and language. Dewey's theory of mind assumes the human being as a living organism, endowed with a brain and a body involved in continuous interactions with various physical, social and cultural environments. This mind has profound biological dimensions, but it is also fundamentally a social phenomenon.

In *Logic - The Theory of Inquiry* (1939), Dewey states that the so-called higher cognitive functions (conceptualisation, reasoning and use of language) emerge from the lower functions (perceptual, motor and affective), independent of entities, causes or unnatural principles. According to Dewey's naturalistic principle of continuity: "... rational operations are born from organic activities, without being identical to those that gave rise to them" (DEWEY, 1939, p. 19).

In other words, Dewey explains the *mind* and all of its operations and activities non-dualistically, based on the bodily operations of creatures that are the result of an evolutionary history with stages of development that have shaped their cognitive abilities and our identity. For Dewey, the mind is not an innate capacity or a distinct metaphysical entity or substance. The mind arises from the struggles of certain highly developed organisms that have learned to investigate, communicate and coordinate their activities through the use of symbols.

This functional, non-dualistic approach by Dewey is quite compatible with the prevailing points of view in today's cognitive neuroscience, according to which the organism and the environment are correlative terms, defined by their continuous interaction. There is no mind without a functional body and brain, nor a functional brain without cognitive activity in interaction with the environment.

The cognitive neuroscientist Antonio Damásio defines the organism-environment and mind-body relationships in a way which is compatible with Dewey's formulations:

The human brain and the rest of the body constitute (1) an inseparable organism, integrated through mutually interactive biochemical and neural regulatory circuits (including endocrine, immunological and autonomous neural components); (2) the organism interacts with the environment as a whole: the interaction is not only of the body or the brain alone; (3) the physiological operations we call the mind are derived from the structural and functional set, and not just the brain: mental phenomena can only be fully understood in the context of an organism interacting in an environment. (DAMÁSIO, 1994, p. Xvii.)

⁷ Based on Peirce's *Sinequism*, a principle according to which we must expect natural evolution to take place through *continuities* as opposed to *discontinuities*.

For Dewey (1929), the mind arises when symbolic interactions and the sharing of meanings become possible between intelligent beings. The mind represents the horizon of potentially shareable meanings available to certain highly complex organisms, while individual consciousness is the real perception of a specific organism of specific meanings:

As life is a character of events in a peculiar condition of organisation and *feeling* is a quality of life forms marked by complex and discriminatory responses, so *mind* is an additional property assumed by sentient beings when they develop a capacity for interaction with other creatures through language and communication. (DEWEY, 1929, p. 258)

The Body as Origin of Language and Meaning

Johnson (2010) discusses, in a more specific way, the concept of language in Dewey and also describes the complex roles of the mind and body in the processes of language signification.

Johnson (2010) states that words or symbols for Dewey acquire meaning in speech communities because they point beyond themselves and refer to possible past, present or future experiences: “Meanings are rules for using and interpreting things; interpretation is always an imputation of potentiality for some consequence” (DEWEY, 1929, p. 188).

Dewey (1929) anticipates the deepest perceptions of what later came to be known as speech acts theory⁸ by insisting that speaking a language is a matter of coordinated social action: “The heart of language is not in ‘expression’ of something antecedent, but in communication; in cooperation, in an activity in which the activity of each partner is regulated by the partnership” (DEWEY, 1929, p. 179). Dewey maintains that the symbols acquire meaning in the speech communities and in their functional use to inform, question, beg, help, plan, play, date and a series of other forms of human interactions.

Dewey (1929) also anticipates some of the most significant empirical findings from recent research in cognitive sciences on the *embodiment* of meaning⁹. In his theory of mind and thought there is no place for ideas as *quasi*-entities floating in some disembodied mental space, subject to manipulation by a supposedly pure ego. On the contrary, meaning must come from the experience which is, at the same time, definitely corporeal, biological and cultural.

From an evolutionary and developmental perspective, our higher cognitive functions, including the use of language and abstract thinking, use structures developed from our bodily and biological interactions with the environment.

Dewey notes that:

⁸ See AUSTIN, J. L. *How to Do Things with Words*. The William James Lectures delivered at Harvard University in 1955. Oxford University Press. London, 1962.

⁹ A concept borrowed from James, who defined *embodiment* as the “insuperability of sensation” (1916, p. 79).

Just as when men begin to speak, they must use sounds and gestures prior to speaking . . . when they begin to observe and think, they must use the nervous system and other organic structures that existed independently and previously. That the use reshapes previous materials, in order to adapt them more efficiently and freely for the purposes for which they are intended, is an expression of the common fact that anything changes according to the dynamics of their interactions [...] Similarly, if the *mind* was not, in its existential occurrence, an organisation of physiological or vital matters and, if its functions were not developed from the patterns of organic behaviour, it would have no function in nature. (DEWEY, 1929, p. 286)

Johnson (2010) highlights that, in Dewey's theory of mind, language allows us to mark distinctions and establish meanings that make abstract thinking possible. This view requires the broadest conception of language, involving all forms of human symbolic interaction such as natural languages, gestures, rites, ceremonies, monuments and products of industrial and fine arts.

For the purpose of art as a language, Eldridge (2010) very appropriately states that the aesthetic experience in Dewey creates relationships between nature and experience and generates meaning. In *Art as Experience* (1934), Dewey describes the *mind* as “mainly a verb” (DEWEY, 1934, p. 263). It organizes linguistic, pictorial, spatial, acoustic and kinetic forms, among others, to give meaning and represent the phenomena of human life and nature.

Thus, the uses of language allow us to make crucial distinctions in our experience, to refer to past and future things and events, and especially to formulate abstractions as a means of solving problems and coordinating actions. Language, for Dewey, would therefore be a repository of symbols for all distinctions and demarcations of aspects of experience that a culture has considered important to identify and remember throughout its history. The acquisition of language is such a monumental achievement, according to Dewey, because it makes possible the use of objects and events as signs, which can have symbolic and representational value:

Where communication exists, objects acquire meaning and thus adopt representatives, substitutes, signs and implications, which are infinitely more manageable, more permanent and flexible than the events that gave rise to them. In this way, qualities and predicates can be apprehended [...]. They become capable of survey, contemplation and ideal or logical elaboration; when something can be said of qualities, they become instruments of instruction. (DEWEY, 1929, p. 167)

Johnson (2010) notes that the principle of continuity and the naturalistic theory of language in Dewey seek to explain the emergence of the syntax, semantics and pragmatics of natural languages and symbolic systems, but without employing any separate mind, conceptualisation or reasoning of the body. Dewey outlines a general theory of language based on the view that the meanings of abstract terms must

somehow be based on the sensorimotor processes of cognition. Perception and action structures are necessary for higher level cognition and abstract thinking.

Johnson (2010) points out that a new field known as cognitive linguistics has emerged in the last three decades. This new discipline seeks to explain the phenomena of natural languages as products of cognitive mechanisms that have their origins in perception, object manipulation and body movement. For cognitive linguists, meaning arises from our sensory-motor experiences and are then developed through imaginative mechanisms such as images, schemes, conceptual metaphors, metonymies and various forms of conceptual combination, to form abstract thinking.

A Theory of Communicative and Social Action of the Mind

Godfrey-Smith (2006) offers an illuminating synthesis of the role of language in Dewey. In the Deweyan perspective, language works as an instrument for the development of intelligence and an instrument for the exercise of freedom and its implications in terms of social responsibility and ethical commitments.

From the social psychology of William James and Joseph Herbert Mead¹⁰ and Darwin's evolutionism, Dewey develops a theory of communicative action to understand the formation of meaning, their relationships and involvement with objects and to determine whether meaning is a unified phenomenon. Dewey also develops a social theory of mind based on the idea that meaning and representation are essential for the development of abstract thinking.

For Dewey, sentient beings create mental representations of the world through socially supported linguistic means in search of solutions to problems. These mental representations present, in addition to a distinct logical profile, a kind of extension and reach, in contrast to the precursors of thought in irrational animals, which are only involved in superficial interactions with the environment.

With the advent of language, the extension of these cognitive abilities has been dramatically expanded and focused, to the point of developing what we can call intelligence, which, in addition to being an essential tool for survival, represents something unprecedented in nature.

According to Godfrey-Smith (2006), Dewey attributes semantic phenomena to the simplest types of behavioural coordination and the use of signs. Verbal behaviours and representations in specific episodes become stable and persistent in speech communities. This is a kind of enrichment of the causal powers of ordinary objects; acquiring meaning is acquiring the ability to affect the course of events in a particular way.

The acquisition of meaning by objects is a gradual process in which representations, previously diffuse, gain focus and eventually stabilise. In human beings, we find not only the most basic forms of representation, but an entire complex structure to interact symbolically with our peers and environments.

The empirical phenomenon of language and thought is a system that we use to describe, predict, influence and manage the use of representation of ourselves

¹⁰ George Herbert Mead (1863 - 1931), American philosopher, sociologist and psychologist, affiliated with the University of Chicago, where he was one of several distinguished pragmatists.

and others. We look within a partial tangle of ideal semantic and epistemic concepts of freedom and, considering the influence and impact of stabilised representations on the environment, it is natural for individuals to be held responsible for their discourse and for their commitments.

Godfrey-Smith (2006) records Dewey's concern about the ethical and epistemic responsibility of discourse. Discursive beings cannot do without a normative evaluation, under penalty of losing the legitimacy and justification of their actions.

Language and Thought: Functions of Signs.

Dewey expands and deepens his vision of language and communication and analyses the construction of meaning especially in two of his books. In the first one, *How We Think* (1910), we find a more technical and detailed discussion about the nature of language, its relations with thought and about the role and function of signs.

For Dewey (1910), natural events manifest themselves as a language for beings with reading capacity. An irrational animal can enter its hole when rain approaches, because of some immediate stimulus to its organism. A thinking being will realise that certain facts given are likely signs of future rain and will take action in light of this reasoning.

The planting of seeds, the cultivation of the soil and the harvesting of grains are intentional acts, possible only for beings who have learned to subordinate the elements immediately felt, open *the book of nature* and interpret their language. For a thinking person, things are records of his past, as fossils tell of the Earth's previous history, or are prophecies of its future, like the prediction of eclipses from the positions of celestial bodies.

The language in the trees, the books in the streams and Shakespeare's *sermons on the stones*¹¹ dramatically express the quality and richness of the contribution of rational thought to our existence. The function of meaning is to make all prediction, all intelligent planning, deliberation and calculation possible.

Dewey (1910) observes the ambiguous position of language and points out that speech has such a peculiar connection with thought that it requires a special discussion. For the ancient Greeks, *λογος* indifferently meant 'logic', 'speech', 'thought' or 'reason'. The conviction that language is necessary to think and is identical to thought is confronted by the realisation that it can also be used to pervert and hide thought.

According to Dewey (1910), language is a necessary tool for thinking, as it is what fixes meanings. Dewey (1910) recalls that there are three traditional views on the relationship between thought and language: first, that they are identical; second, that words are the dress of thought, necessary not for thought, but only to express it; third - the view adopted by Dewey - although language and thought are different entities, we think and communicate through language.

When it is said, however, that thinking is impossible without language, we must remember that language includes much more than oral and written speech.

¹¹ *As You Like It*, Act 2, Scene 1.

Gestures, images, monuments, visual images, finger movements – anything consciously employed as a sign is, of course, language.

To say that language is necessary for thought is to say that signs are necessary¹². Thought does not deal with neutral things, but with their meaning, their suggestions; and these meanings, to be apprehended, must be incorporated into sensitive and particular existences. Without sense, things are nothing but blind stimuli or random sources of pleasure and pain; and since meaning is not tangible, it must be anchored or linked to some physical existence. The entities whose special function it is to fix and express meaning are the signs or symbols.

If a man approaches another to throw him out of the room, his movement is not a sign. If, however, he points at the door with his finger or utters the sound, his movement is transformed into a vehicle of meaning: a sign or symbol. We don't care about the signs themselves, but everything they mean and represent. *Canis, hund, chien, dog* – the exterior of the sign makes no difference, as long as it represents a logical meaning.

Dewey (1910) presents an outline of a semiotic theory, analyses the nature of signs and discusses the differences between natural and artificial symbolic representations. Natural objects are signs of other things and events. Clouds represent rain; footprints represent company; protruding rocks serve to indicate minerals below the surface. However, the limitations of natural signs are considerable.

First, physical or direct arousal tends to distract from what is meant or indicated. When we point at something to an animal, it follows the movement of our hand and ignores the pointed thing. Second, where there are only natural signs, we are at the mercy of external events; we have to wait until the natural event presents itself to be warned of the possibility of some other event. Third, natural signs, not originally intended to be signs, are heavy, inconvenient and uncontrollable.

Artificial signs overcome these restrictions and, for this reason, are indispensable for any great development of thought. Speech, gestures, sounds, written or printed forms are strictly physical entities, but their intrinsic values are intentionally subordinated to their representative meaning. The direct and sensitive value of weak sounds and written or printed marks is very small. Consequently, attention is not distracted from its representative function. Their production is under our direct control so that they can be produced when necessary.

Arbitrary linguistic signs are convenient, compact and delicate. Breathing, movements of the throat and mouth muscles, volume and amount of air can be controlled indefinitely. However, the sounds, although subtle, refined and easily modifiable, are transitory. This limitation is met by the system of written and printed words, which appeal to the eye. *Verba Volant. Litera scripta manet*¹³.

Considering the intimate connection of meaning and signs, we can observe in more detail how language works and organises signs. Dewey (1910) points out that the first function of the sign is to make meaning distinct. We all experienced how to learn an appropriate name for what was obscure and vague has the power to clarify

¹² Dewey here echoes Peirce. Signs are indispensable means for thought and language. Thinking as Plato observed is “a silent speech of the soul with itself” (PEIRCE, 1984, p. 172).

¹³ Latin quote. Oral language vanishes, but written language remains.

and crystallise a subject. Elusive meaning, when attached to a term, acquire limits, leave the void and stand out as an entity with a life of its own.

When Emerson¹⁴ said that he preferred to know the real name, the poetic name, of something, than the thing itself, he probably referred to this inspiring and revealing function of language. Children are happy to question and learn the names of everything around them. This indicates that meanings are becoming concrete entities for them and that their trade in things is moving from the physical to the intellectual.

Indigenous peoples attribute magic to words. To name something means to grant a title to dignify and honour an entity, elevating it from a mere physical occurrence to a distinct and permanent meaning. Knowing the names of people and things and being able to manipulate those names represents, in the culture of these peoples, being in possession of their dignity, their value and power.

The second function of the sign is to register and preserve meaning. Dewey (1910), like Heraclitus¹⁵, understands that our lives reflect the state of flux and transience of the world and, for this reason, things escape our knowledge. Our direct and sensitive relationship with objects is very limited. The suggestion of meaning by natural signs is also limited to direct contact or vision. But a meaning fixed by a linguistic sign is preserved for future use and can evoke absent objects.

As intellectual life depends on having a repository of meaning, the importance of language as a tool to preserve meaning is fundamental. Certainly, the storage method is not entirely aseptic; words often corrupt and modify the meanings they should keep intact, but responsibility for infection is a price paid by all living beings for the privilege of living.

The third function of the sign for Dewey (1910) is to transfer meaning and create experiences. When meaning is highlighted and fixed by a sign, it is possible to use it in new contexts and situations. This transfer and reapplication are the keys to judgments and inferences. The presence of clouds indicates a storm and this cumulative knowledge allows the development of intelligence, experience and the formation of habits. Our ability to use the past to judge and infer the unknown transcends the barriers of time and makes meaning applicable in determining the character of the new. Discursive formations are our great carriers, the ideal vehicles for carrying meanings of experiences that no longer interest us for those that are still obscure and doubtful.

Finally, Dewey (1910) stresses that the logic of language depends on the organisation of signs. In emphasizing the importance of signs in relation to specific meanings, we overlook another equally valuable aspect. Signs not only mark specific or individual meanings, but are also instruments for grouping meanings in relation to each other.

Words are not just names or titles with unique meaning; they also form phrases in which meaning is organised to form structures. When we say 'That book is a dictionary' or 'That blur of light in the sky is Comet Halley', we express a logical

¹⁴ Ralph Waldo Emerson (1803 - 1882) - a New England preacher, essayist, lecturer, poet, and philosopher, one of the most influential writers and thinkers of the 19th century in the United States.

¹⁵ Heraclitus of Ephesus (535 - c. 475 BC), was a pre-Socratic Ionian Greek philosopher.

connection - an act of classification and definition that goes beyond the physical thing to the logical region of genera and species, things and attributes.

Propositions and sentences have the same relation to judgments that different words present in relation to meanings or conceptions. Just as words imply a sentence, a sentence implies a larger set of consecutive speeches in which it fits.

It is often said that grammar expresses the unconscious logic of the popular mind. The main intellectual classifications that constitute the operations of thought were built for us by our mother tongue. Our own lack of awareness that the language we use employs the intellectual systematisations of the human race shows how completely accustomed we have become to its logical distinctions and groupings.

Language as Matrix of a Research Theory

Dewey's second book that highlights his language conceptions is *Logic - The Theory of Inquiry* (1939). Dewey examines here a theme that is very dear to him - the role of language in the development of logical theories - which he prefers to call "theories of investigation" (DEWEY, 1939, p. 9).

For Dewey (1939), the transformation of organic into intellectual behaviour, marked by logical properties, is a product of the fact that individuals live in a cultural environment. Such experience forces individuals to assume in their behaviour the point of view of customs, beliefs, institutions and meanings that are at least relatively general and objective.

Language occupies a significant place and plays a peculiar role in the complex that forms ambient culture. It is itself a cultural institution among many other institutions and an agency through which other institutions and acquired habits are expressed and permeate both the forms and the contents of all other cultural activities. In addition, it has its own distinct structure that is capable of abstraction as 'form'.

This structure, when abstracted as a form, had a decisive influence historically on the formulation of logical theory; symbols that are appropriate to the form of language as an investigative agency (as distinct from its original function as a means of communication) are still especially relevant to logical theory. Consequently, further discussions will take into account the broader cultural environment and confine themselves to the special function of language in effecting the transformation of the biological into the intellectual and potentially logical.

We reiterate that Dewey (1939) defines language in a broader sense than oral and written discourse and also includes not only gestures, but rites, ceremonies, monuments and products of industrial and fine arts. A tool or machine, for example, is not simply an object with its physical properties and effects, but it is also a type of language because it says something to those who understand its operations and consequences. For primitive people, steam powered or electric machines would be a foreign language.

Most technological devices of modern civilisation are closely linked to interests, occupations and purposes in which language can serve as an instrument and the instrument as a language. Dewey (1939) discusses the materiality and conventionality of language, composed of physical realities such as sounds, marks on paper, a temple, a statue or a loom. However, these realities do not operate as

mere physical things in communication, but because of their capacity or representative meaning.

The particular physical reality that has meaning is, in the case of speech, a conventional question. The common convention or consent that differentiates, registers and communicates meaning arises through actions, shared behaviours and their consequences. The physical sound or mark acquires meaning through its functional use in speech communities, not by any explicit call to pass resolutions on a certain meaning for a sound or mark. Even when the meaning of certain legal words is determined by a court, the agreement of the judges is ultimately not decisive. Subsequent discussions may eventually establish the real meaning of the words and concepts in question. The agreement in the propositions is only significant in the collective discussion process from the point of view of different situations and contexts.

Dewey (1939) continues his analysis of the sign's arbitrary and conventional character and explains that he mentions the above considerations because, as in Aristotle¹⁶, they prove that a symbol is conventional, but not its meaning. Symbols are established by agreements between speakers who share experiences existential and are affected by their consequences. The acoustic or graphic images that represent 'dog' or 'justice' in different cultures are arbitrary or conventional in the sense that, although they have causes, there are no reasons for their choice in particular.

However, in communication, its meaning is common because it consists of existential conditions. If a word varies in meaning in the interactions between different cultural groups, communication will collapse until other variations of interpretation can be translated and agreed between the parties. Whenever communication is blocked, the result is misunderstandings and not just a lack of understanding.

It is a mistake to assume that the misunderstanding is about the meaning of an isolated word, just as it is fallacious to assume that two people are in agreement because they accept the same dictionary meaning of a word. Agreement and disagreement are determined by the consequences of joint activities. Harmony or disharmony arise in the effects produced by the various language-dependent activities.

The Concept of *Warranted Assertibility*

As we have demonstrated, 'mind, thought and language' are unified within the pragmatic research theory developed by Dewey. And its conceptions of language, in addition to functioning as a form, product and condition of connection between these entities, culminate in the construction of his concept of *warranted assertibility*.

Dewey (1939) argues that inquiry should be seen in naturalistic terms, as when an organism seeks to secure equilibrium with its environment. Inquiry is triggered when we confront a situation in which there is some issue or undetermined situation that must be resolved. We try to transform an indeterminate situation into one which is determinate by examining possible solutions, tentatively adopting a

¹⁶ See MODRAK, D. K. W. *Aristotle's Theory of Language and Meaning*. Cambridge University Press. Cambridge, UK, 2001.

hypothesis which we then investigate to see whether it answers our needs. If a hypothesis succeeds in answering a need by transforming an indeterminate situation into one which is determinate, it is said to be *warranted*:

If inquiry begins in doubt, it terminates in the institution of conditions which remove the need for doubt. The later state of affairs may be designated by the words *belief* and *knowledge*. For reasons that I shall state later, I prefer the words *warranted assertibility* because they are free of the ambiguities that link the investigation to some kind of assurance. (DEWEY, 1939, p. 7).

As to the origins of the concept, Putnam (2010) states that, although Dewey was greatly influenced by James' social psychology, *warranted assertibility* and its corollaries - *anti-foundationalism* and *fallibilism*¹⁷ – must be attributed to Peirce in his concern with the importance of the principles of formal logic in the processes of constituting any type of investigation. Thereupon, Dewey developed the basis of his own instrumental theory of knowledge in which reflection and inference are used as investigative tools organised in a logical structure where propositions and judgments must culminate in legitimate and justifiable discourse.

As far as language is concerned, Brandom (1998) reminds us that, under the influence of the *German Idealism* of Kant and Hegel, the classical American pragmatists developed a system of thought that defines us as normative and discursive beings. The idea of individual consciousness is essentially Kantian, while the collective character of the mind is due to Hegel's formulations.

Discourse, therefore, implies in inferentially articulated normativity. We are constantly involved in discursive practices in which we have to explain and justify our actions, ask for and give reasons and this normative dimension separates us from beings who can feel, but are not capable of rational thinking.

Brandom (1998) defines the role of communication and language, not only as an exchange of information, but as a means to rationally navigate between different opinions, projects, plans to allow an understanding between socially organised individuals. Language and speech, in addition to serving as means of cooperation, must also make clear what our ethical commitments are. Discourse implies in claims to truth and legitimacy and produce effects and consequences for which we are socially responsible.

Final considerations

Finally, some considerations about Dewey's thinking, the most long-lived, productive and closest to our time among the three classical American pragmatists. Heir to Peirce and James, Dewey developed and refined his own logical, ethical and aesthetic concepts and built a theory of investigation about the organic relationship between individuals and their physical, cultural and social environments. Dewey

¹⁷ *Anti-foundationalism* and *fallibilism*, two central themes in classic pragmatism, represent a rejection against Cartesian absolute foundation of knowledge and truth. Pragmatists propose instead that science must be based on reasonable doubts and the fact that it is a fallible but correctable endeavour.

defined this relationship as *experience* and concluded that it is only possible through human communication.

Although not a linguist, but a polymath, Dewey incorporates and anticipates the discussion of traditional linguistic themes. The question of the naturalness or conventionality of signs has been around since the *Cratylus*¹⁸, but is taken up by Dewey in the form of a *structuralism* and a *theory of value* that go beyond Saussure's studies for treating language as any type of communicative interaction between sentient beings and their environments.

In Dewey, the concept of experience, action and the effects of discourse; the social construction of language and the impossibility of private languages anticipate the *theory of speech acts* in Austin and Searle and *language games* in Wittgenstein. Dewey's proposals on language allow for a logical and historical progression between *The Pragmatic* and *Linguistic Turns*.

In his theory of communicative and social action, Dewey explains the instrumental role of language in creating the mind as a collective entity and consciousness as an individual entity. Mind and consciousness evolve as biological and social endowments and interact to create the processes of language signification. Dewey argues that language serves as an instrument for the development of intelligence and for the exercise and protection of individual freedoms, but that it is necessary to pay attention to its implications in terms of social responsibility and ethical commitments.

Communication in Dewey goes far beyond natural languages. Again, as a result of evolutionary issues, any phenomenon manifests itself as a language for beings with cognitive abilities. Due to a constant circular interaction between individuals and their natural and cultural environments, organic behaviours become intellectual from the point of view of customs, beliefs, institutions and meanings shared within the same discursive community.

In Dewey's theory of language conventional symbols, sounds and signs are organised into formal systems and meanings emerge as part of a constellation of related possibilities. And his conceptions of language led him to develop his concept of *warranted assertibility*. This key concept forms the basis of his instrumental theory of knowledge in which reflection and inference are used as research tools for problem solving.

Dewey defines the logical structure of his research theory in which propositions and judgments must culminate in legitimate and justified discourse. We are constantly involved in discursive practices in which we have to explain and justify our actions and this normative dimension separates us from beings who can feel, but are not capable of rational thinking.

Dewey defines the role of communication and language, not only as an exchange of information, but as an expedient to navigate rationally between different opinions, projects, plans to allow an understanding between socially organised individuals. Language and speech, in addition to serving as a means of cooperation, must also make clear what our ethical commitments are.

¹⁸ Platonic dialogue probably written during his so-called middle period.

We understand that this concept of *warranted assertibility* is the essence of his theory of language. Discourse, we reiterate, implies in a claim to truth and legitimacy, produce effects and consequences for which we are socially and morally responsible.

We end with a quote by the neo-pragmatist Richard Rorty on the central concerns of Dewey's moral and ethical philosophy:

Dewey rejects epistemological theories and replaces questions such as: 'Does this proposition represent the essence of reality?' With other questions such as: 'What would it be like to accept this as truth?', 'What happens if I do so?' And finally, 'What kinds of commitments would I be making?' (RORTY, 1982, p. 163)

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