

Theory and practice: some elements for reflection

Teoria e prática: alguns elementos para reflexão*

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Marcus Vinicius da Cunha¹

The paper examines the usual separation between theory and practice using benchmarks of philosophy and focusing education, particularly the training of teachers. To examine this phenomenon, it suggests that theories are considered as paradigms, according Thomas Kuhn conceptions. Following this thought, it suggests that the debate among paradigms, as well the option for one or more theories as supporting pedagogical practice, involves intellectual and emotional factors. Still, it indicates the relevance of studies on the art of rhetoric, for that all participants of this debate meet the persuasion techniques that are submitted.

Descriptors: Education; Learning; Teachers.

O artigo analisa a usual separação entre teoria e prática utilizando referenciais da filosofia e focalizando o campo da educação, particularmente a formação de professores. Para analisar esse fenômeno, sugere que as teorias sejam vistas como paradigmas, segundo a concepção de Thomas Kuhn. Nessa linha de pensamento, sugere que o debate entre paradigmas, bem como a opção por uma ou mais teorias como suporte à prática pedagógica, envolve fatores intelectuais e também emocionais. Ainda, indica a relevância de estudos sobre a arte retórica, para que todos os participantes do referido debate conheçam as técnicas de persuasão a que são submetidos.

Descritores: Educação; Aprendizagem; Docentes.

El artículo analiza la habitual separación entre teoría y práctica utilizando puntos de referencia de la filosofía y centrándose en el campo de la educación, particularmente la formación del profesorado. Para analizar este fenómeno, sugiere que las teorías deben considerarse como paradigmas, según lo diseño de Thomas Kuhn. En esta línea de pensamiento, sugiere que en el debate entre paradigmas, así como en la opción por una o más teorías como apoyo a la práctica pedagógica, participan factores intelectuales y también emocionales. Por último, indica la relevancia de los estudios sobre retórica, para conocer las técnicas de persuasión que son enviadas a todos los participantes de este debate.

Descriptorios: Educación; Aprendizaje; Docentes.

¹PhD in History and Philosophy of Education, Habilitation (Professorship) in Educational Psychology. Associate Professor, Department of Education, Information and Communication, Faculty of Philosophy, Sciences and Letters of Ribeirão Preto - University of São Paulo. CNPq (National Council for Scientific and Technological Development) Researcher. E-mail: mvcunha2@hotmail.com

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INTRODUCTION

The issue of the relationship between theory and practice is recurrent in all professional fields, but takes special emphasis on initial training and continuous training courses, which involve intervention activities in some aspect of reality - which is the vast majority of cases.

The debate on this topic appears in varied forms, and perhaps the most common is the one that talks about the opposition between theoretical foundations on the one hand, and practical activities on the other. It is the well-known discussion of 'theory vs. practice', in which the famous phrase fits: 'in practice, the theory is different'¹.

In this thought is usually said, in short, that the theories transmitted during the professional training and continuous training courses have little use - or no use, depending on the radicalism of the debate - when taken to the field of the actions that people need to play in various professions.

Before starting to approach the topic, there are two explanations. First, it is based on references within the Philosophy, since the controversy that surrounds it is epistemological, concerning what is meant by 'theoretical knowledge', considering the role of theory to life in general, and also what is meant by 'practice'. Second, the matter will be discussed building on education, specifically teacher training and emphasize that this discussion does not depends on the field of knowledge that is at issue, provided that this knowledge has the goal of guiding conduct, practical actions.

The objective of this work is to encourage reflection and debate on the topic of the relationship between theory and practice. For this reason, it will not be offering formulas to solve dilemmas. The aim of this text is only in present some considerations and suggestions based on thought and study about this problem in recent years.

METHOD

Considerations and suggestions arise from investigations that have been carried out under the Research Group *Rhetoric and Argumentation in the Pedagogy*. The methodological approach is based on the reflections of Aristotle and developments of Aristotelian philosophy elaborated by contemporary authors such as Chaïm Perelman² and Stephen Toulmin³.

As it can be noticed in the course of this text, it will assume that the discourses that convey theoretical formulations are intended to influence pedagogical practices, which is why there is a search to understand them by examining the argumentative strategies used by their authors to persuade the recipients of their thesis, which are the students of teacher training and the professionals who work in education.

RESULTS AND DISCUSSION

A more vivid description of the problem

Virtually everyone working in the area of teacher training have already had contact with the manifestation of some very common feeling among students preparing for the craft of teaching and also among professionals working in primary education: the feeling that the theories taught during the formative years do not apply to real situations of schools, particularly to what happens inside the classroom.

It is as if there were a perfect universe in which everything fits; everything works according to the theoretical ideal, on one side; and on the other hand, a kingdom of imperfections and dysfunctions never imagined by the authors of the theories. All theories about human development, learning, teaching methods, school management and others - all melts into air, all turns into gibberish, as soon as the teacher enters the walls of the institution.

This feeling begins to take shape, in fact, long before the start of working life, as

soon as the student begins to accomplish the internships that put him in direct contact with school life.

The feeling of helplessness is great at that time; and the solution that presents itself as the most viable immediately is the accommodation to models that are already routinely adopted by those working longer. This attitude contributes to perpetuation teaching conditions, for good or for evil.

Unfortunately, mostly for evil, since this type of solution reaffirms routine habits and can be described as reactionary, in the sense that react or reactive a series of actions taken without reflection, without questioning.

It should be recognized at this point that it is resorting to generalizations. One must remember that many young teachers were able to face adversity and overcome the initial difficulties of the profession, keeping alive the flame of inventiveness that is so necessary to teaching. As for older teachers, it is recognized that many of them develop actions worthy of what is expected of a good teacher, and also that they can be generous and welcoming to beginners colleagues. Furthermore, it is important to note that there are many degree courses serious committed about tackling the dichotomy between theory and practice.

Generalizations outlined here serve only to show the existence, at present, of a tendency - more or less strong, depending on the context examined - to oblivion theories when the professional enters the world practice. Furthermore, there seems to be a trend these days to deny the theoretical universe as if practice was regardless of theorizing or, even more, as if actions were more successful when devoid of theories.

An investigation into the origins of the problem

Etymology teaches us that the word 'theory' originally derives from the Greek *theoria*, meaning a kind of purely rational knowledge, or a set of fundamental principles of an art or a science. The word

'practice', in turn originating from *praktike* Greek, has the connotation of 'experience', inherited from the Latin word with the meaning of skill, or something 'empirical', also a term derived from the Latin, translating the idea of knowledge whose acquisition is independent of study⁴.

In ancient Greek philosophy, the name of theoretical knowledge was given to that which had no practical application; a pure and disinterested knowledge, divorced from experience, in other words, from practice⁵. The distinction between theory and practice took extreme character through Plato, for whom *theoria* was identified with the idea of 'contemplation', a concept that expresses the attitude of the philosopher, who knows what is always and never changes, what remains, regardless of the disasters of the concrete world.

The Platonic philosopher is one who knows the totality of being using this intellectual resource, the contemplative attitude that enables one to grasp things in their essence and not in its appearance, which is how they present themselves to the common man. What presents itself to other men is just an illusion, shadows of true and immutable things^{6,7}.

Therefore, Plato is at the origin of a way of thinking that spanned the centuries: things that inhabit the universe of the theory are true and therefore more valuable than those found in the sphere of practice. To ascend to the truth, it is necessary that man departs from the experiences of everyday life, from experiences with what appears to be true when it is not. In this way of thinking, only theory can reveal the essence of the beings of the world, including the man himself; only theory can guide the action of man in this world populated by transient and illusory beings that are affected by time and circumstances.

The Platonic conceptions were later incorporated into Christian philosophy, especially through Augustine, who identified the space of true and immutable

things apprehended by the intellect, as described by Plato, to the kingdom of God. For Augustine, God is the immutability and the truth that to Plato referred to; man only becomes capable of knowing when illuminated by divine wisdom, because God dwells within man, constituting his essence. The attachment to earthly things is the removal of man before God, a process which, in Christian theology, is called sin⁸.

The emergence of the contemporary problem

Following the thought that descended from the Greeks and went through the medieval era, the origin of the dichotomy between theory and practice is understood, but if taken to reverse the trend, as indicated above - characteristic of contemporary times, namely, to disregard or even denial of theory before practice.

According to ancient and medieval thought, components of intellect or spirit should be privileged rather than the mere doing. Therefore, schools should strive to convey theories about reality, not occupying themselves with placement in the universe of action, deemed unworthy of man.

In fact, this way of thinking marked the education for a long time and is one of the traits that is generically termed 'traditional teaching', a way of educating guided both on the authority of the master and on the value attributed to consolidated knowledge in books, whose pages gather all the knowledge produced by the human intellect, the whole truth produced by science and philosophy.

Moral guidelines are worth more than the teachings regarding the work, for example; theoretical training should supplant contact with the empirical life; one should be formed not for life, but to contemplate life; not through experience, but only through thought.

This is one reason - among others, certainly - that school education was for so long a privilege of few children and young people. The school was an institution

designed and interesting only for those who had time and financial resources to stay away from work; teachings taught cultivated a person versed in theories and values at the highest level of illustration, but devoid of tools to tackle a profession - unless, of course, one of the 'liberal' professions.

It turns out that the history of ideas did not follow a straight line. Early in the modern era emerged what can be considered an offshoot of Platonism, the empiricist philosophy of writers such as John Locke, Francis Bacon and David Hume. Empiricism holds that knowledge comes from experience, sensations, from what impresses through sensory organs, constituting a posteriori the mind⁵.

Hume^{9,10} explains that what is called 'self' is nothing more than a 'beam of senses', a cluster of sensations that rushes wildly into the beings, acquiring some joint by some very simple ordering principles - similarity, contiguity and causality.

The empiricist conceptions does not imply a radical denial of the intellect, but certainly it considers that the ideas and the mind itself, where ideas are deposited, are dependent on what is external; there is nothing innate in man, except a diffuse human nature able to arrange what is conveyed by the senses, as stated Hume^{9,10}; everything that human beings are primarily stems from the experience, from action.

Taken to the extreme, as in fact occurred in the course of modernity, empiricism resulted in the predominance of practice with regard to the acquisition of knowledge, putting in the background theory and causing the rejection of all forms of intellectualism. Inverting the Platonic view, empiricism instituted the rule of practice over theory.

The dual tendency

The philosopher John Dewey¹¹ says that man likes to think of extreme form, positioning ideas into poles that oppose each other; there is a tendency to

reasoning polarized, dualistic way, always thinking in terms of 'either-or'; to qualify something as right, immediately search for its opposite typifies it as invalid, wrong, insufficient; there is difficulty in admitting the existence of intermediate positions.

The history of philosophy echoes the comment of Dewey¹¹. The rationalism of Plato establishes theory as a priority, disqualifying practice, while empiricism of modern thinkers leads to the opposite pole, reversing the equation, favoring action over contemplation.

Education is no different: two pedagogical trends have been feuding for centuries, one saying that education is a process that is 'inside out', ie, the formation of man must focus exclusively on the inner life, the intellect and mental instances to account for the acquisition of moral principles previously established; another aspect defines education as a procedure that operates 'outside-in', ie, as a set of external pressures that should result in the formation of intellect and morals.

The problem of the opposition between theory and practice begins when the student or professional of education realizes that there is disagreement between the theoretical concepts that make up the field of pedagogy. It is believed that this is the first and decisive step to establish that sense of helplessness mentioned earlier in this text, so marked at the time the person is faced with the reality of the school and the classroom, and realizes that everything that seemed so solid is fading in the air.

The person who initiates the study of theories has some trouble understanding how it is possible that there are so different statements about the same objects - the human person, its development process, factors that favor or hinder learning, the best ways to lead someone to knowledge. It seems that life is an eternal uncertainty, as no theoretical formulation was able to garner unanimous acceptance.

Following the human tendency toward polarization, people who face with

this theoretical disparity tends to position a theory against the other, as if they all participate in a contest to decide which is the best and, consequently, what is the worst; which one is right and which is wrong; which applies perfectly to educational phenomena and which presents a distorted view of educational phenomena. The beginner in theories positions himself as if he is the judge in court, with the obligation to offer a verdict, incriminating or exonerating the defendant.

Theories as paradigms

It is possible that professional training and and continuous training courses could greatly benefit students if they worked a notion considered essential to understanding the world of theories and hence the relationship between theory and practice: the notion of 'paradigm', according to the preparation made by Thomas Kuhn initially in the work "The Structure of Scientific Revolutions"¹² and later in the book "The Road Since Structure"¹³.

Kuhn shows that the scientific field is organized, in general, in communities of researchers organized around paradigms, each setting problems, solutions and own methods to address specific research questions; each research community adopts their own paradigm, but when certain circumstances require or permit, intense debate is settled among scientists, which may result in the replacement of the current paradigm on the other.

Sectors that involve intervention on some aspect of reality seek grants in the sciences to form their own theories and thus prepare grounds for the actions that target their specific objects of action. When the sciences where these fundamentals are sought are debating paradigms vying for hegemony in certain scientific community, those sectors of practice performance are often adrift, without being able to define the parameters guiding their actions.

Take the case of education to illustrate this idea: to act upon the learning

phenomena, for example, there is a need to define what learning is, what the constituent factors of this process are, what facilitates and what hinders its effectiveness and thus decide on the most appropriate teaching methods. To answer these questions, the knowledge of psychology can be called upon, as it actually happens, but the psychology is not a unified field of knowledge; psychology consists of competing paradigms, the members of psychologists scientific community not being able to formulate consensual, absolute definitions to guide pedagogical practices^{14,15}.

It is important to remember that education also depends on other sciences, whose paradigms are called to assist in the task of outlining the educational theories and practices. Theories of education involve knowledge of areas such as philosophy, anthropology, sociology, and others in which the paradigmatic debate is constant, as well as in psychology.

Thomas Kuhn's ideas help to understand that these debates have only one goal, which is simply to garner fans as a paradigm becomes dominant not because of all the truths that supposedly contains, but due to the sustained power of persuasion their advocates. Who is more persuasive in defending their paradigmatic formulations will gain more followers which, in turn, may occupy influential positions in universities, research funding agencies, journals and books editorials; positions that allow them to make the dissemination and implementation of the paradigm they advocate even more broader.

Persuasion and passions

The assertion that the power of a paradigm comes from persuasion and not from truths in their propositions may seem strange and even scary for many people. It is more usual to think that scientists only give its approval to a theory when it is true, ie, when it corresponds exactly to what

happens in nature, as if the theoretical statements faithfully reflect reality.

Following the ideas of Kuhn, this is a misconception, because what takes a theory to be scientifically endorsed is its plausibility; is the fact that it describes with some degree of accuracy what really happens. This means that there is also some degree of error in the accepted theories. The question is how to determine the acceptable level of error for a theory to be adopted by a community of scientists.

This new conception of science is difficult to understand for many people because it goes against common sense that human beings are endowed with supreme powers to know and master the world around them. The quest for certainty is something that mobilizes since the beginning, having been significantly marked by scientific advances of the modern era, which bequeathed the belief that one can achieve absolute certainties. But since the early decades of the last century, particularly under the influence of quantum mechanics, the science incorporated uncertainty as one of its essential elements¹⁶.

Therefore, the debate between paradigms aims to determine the margin of error in the theories, which means reducing the uncertainty that pervades all theoretical formulations. As stated, this is not deciding where or with who is the truth, but on what is most acceptable to the activity of scientists can continue advancing. In this debate, arguments are placed in the scene that appeal to rationality and also arguments that lie outside the realm of reason, since they relate to the passions.

The word 'passion' is derived from the Greek *pathos* yielding the Latin word *passio*, meaning relates to a disturbance in the soul, an impulsivity that approaches the animality¹⁷. Aristóteles¹⁸ in *Rhetoric*, defines passions as what changes humans and influences the formation of judgments that one does about things. The passionate,

or emotional components escape the control of reason, but also actively participate in placements for the things that surround men; emotions are determinants in the decisions that are taken in situations involving controversies, such as the ones established between the theories that affect the field of education.

The discussion about the links between the intellect and the passions is dominated by a conception that puts emotions aside reasoning, usually as something that hinders rational thought and fair deliberation. This conception is an untenable dualism, because what happens in fact is that all ideas and decisions are influenced by tastes, preferences, loves and hates, and the more you become aware of this process, the more awareness you have of the reasons for choosing this or that way.

An illustration

It can be considered the case of a theory currently in vogue, which attributes the cause of global warming to human action, implying the need for measures to restrict industrial activity, among many others, to try to stop the impending planetary catastrophe. This is the opinion of researchers and activists connected to the Intergovernmental Panel on Climate Change (IPCC), an organization that studies the changes in climate. Their point of view is conveyed as if it were the only one, as if it was consensual.

In fact, there are differences; many scientists say global warming is produced by several factors, many of which are far more relevant than the aggression made by man to nature.

What gives the IPCC's theory the appearance of only theory, reaching almost prevent disclosure of competing theories? Do the ideas advocated by the IPCC are absolutely correct, without error? Opponents should only be heard with the ears of reason, but it is not what happens: when looking at the debate that rages in the media, it is notable that the content of the arguments involved, as a rule, attempts to disqualification of that oppose the IPCC, as if their data were insufficient or as if

their intentions were contaminated by unacknowledged political goals. Interestingly, these opponents respond with the same speech, denouncing that IPCC also has political commitments and that its members are the ones scientifically unreliable.

The two views are impossible to be proven, at least in the medium term. If there is no way to prove who has the true theory, why is there so much discussion? The debate aims to sensitize people to agree and support a position, thus rejecting the other. The aim is to garner support not only from the general public, but especially from those who hold positions of command which can influence scientific practice, making decisions related to research grants, publishing books and journals, training of new professionals, and so on.

It is to this audience that the debaters are addressed; this is the public to be persuaded - not only persuaded by rational arguments, but also by passion mobilizing arguments.

The responsibilities of the auditorium

With theoretical choices in the field of education is no different. No scientific theory is impossible to put into practice, but neither can be fully implemented with zero margin of error.

It is likely that all theories are doomed to failure; primarily because no theory is free from error; furthermore, it must be considered the context in which the theory was developed, usually far from the context in which it applies. In short, it is to believe in the phrase 'in practice, the theory is different', which is not to deny the value of theories, which are important as guides, directions, north, never as dogmatic truths.

The debate between paradigms vying for hegemony in education aims to influence practice, and for that its advocates seek to format or reformat rational and passionate instances of audience.

The audience for whom competing paradigms speeches is formed by undergraduate students and teachers, who have, ultimately, the responsibility to decide on what is most acceptable and convenient for your craft. This auditorium acts as judge in paradigmatic dispute.

So it is emphasized here the responsibilities this auditorium must take on the condition of the recipient - or judge - of the debate between paradigms. The educators should act as judges of the acceptable margin of error in each theory.

Education professionals are able to say whether a theory is adopted, and which, or more than one theory to guide professional conduct, ie, whether it will be done what the debate between paradigms expects to do - opt by one view over others - or if there will be the fusion of orientations arising from different theoretical.

Above all, there is a responsibility not to be led naively in the heat of this debate; it should be clear what the reasons that lead to support this or that theory are. And it is worth remembering that these reasons are not merely intellectual. When it comes to justifying the options by certain ways of explaining the phenomena that challenge teaching practice, is hardly able to give only rational explanations. If pursuit is sincere, it will surely be find justifications of aesthetic and affective nature that would hardly be able to express in words.

Although emotions are usually classified on the opposite end of reason, it is not impossible rationally examine the discourses that use passionateness with the intention of obtaining compliance. The examination of these discourses can be done through a method called 'rhetorical analysis'.

According to Aristotle's definition, 'rhetoric' is the technique of preparing persuasive speeches; and rhetorical analysis, as it is employed contemporaneously, is a set of methodological tools for identifying the

argumentative strategies of the texts that convey theories and practices propositions in the field of human sciences, particularly in the area of education¹⁹.

CONCLUSION

Concluding this text, it is emphasized that the research approach called 'rhetorical analysis' does not claim to dissolve the dichotomy between theory and practice, but it can help education professionals see themselves with more clarity, the positions who take on the educational theories that aim to influence practice.

When making a rhetorical analysis of the speeches that convey these theories, one can become less susceptible to lead blindly by the tangle of theories that contradict each other and that form the basis of the dualism between theory and practice.

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CONTRIBUTION

Marcus Vinicius da Cunha was responsible for the conception and design of the study; the analysis and interpretation of data and writing of the manuscript.