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What does interbehaviorism have to contribute in the educational field?

¿Qué tiene que aportar el interconductismo en el ámbito educativo?

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Abstract

The purpose of this paper is to discuss some of the applications of the interbehavioral model to the system of educational psychology. Some of its foundations are exposed, its application as a logic of theoretical construction, culminating with some characteristics of its technological application, in continuity with the theory of behavior, in the science of psychology. The technological model of didactic discourse is rescued, and its current and potential contributions in the educational field are valued. It is concluded that there is significant potential for the development of interbehavioral thinking in the field of psychology, but researchers need more interest in it.

Interbehaviorism, Technology, Applications

Resumen

El presente escrito tiene por objetivo discutir sobre algunas de las aplicaciones del modelo interconductual al sistema de la psicología educativa. Se exponen algunos de sus fundamentos, su aplicación como lógica de la construcción teórica, culminando con algunas características de su aplicación tecnológica, en continuidad con la teoría de la conducta, en la ciencia de la psicología. Se rescata el modelo tecnológico de discurso didáctico, y se valoran su aportes actuales y potenciales en el ámbito educativo. Se concluye que hay un potencial importante para el desarrollo del pensamiento interconductual en el campo de la psicología, pero hace falta mayor interés de los investigadores en él.

Interconductismo, Tecnología, Aplicaciones

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Introduccion

The recent publication of Hayes and Fryling (2023) has revitalised the discussion about the applicability of interconductual psychology as a guiding principle for the professional practice of psychology in the 21st century.

The present paper aims to point out some of the strengths and weaknesses of the adoption of interconductual principles in so-called applied psychology. First, the central tenets of interconductivism in science will be briefly outlined, secondly, the connections between basic psychology and applied technology will be made explicit. Finally, an illustration will be given in the specific field of educational psychology.

Based on the postulates of interconductism (Kantor, 1958), all events occurring in nature can be conceptualised as continuous interactions between objects and events. From the complexity of the factors involved in each kind of interaction, the different qualitative levels of organisation of the natural order are identified, and from this, each individual science is defined and delimited. Once the sciences are constituted, the explanation of the events that each one deals with resides exclusively in factors present in the analytical level that corresponds to it, never outside it: the causes of chemical events are not in the phenomena studied by physics, nor are the causes of psychological events in biological events (or some kind of organic tissue). If this postulate were not respected, all tentative explanations would sooner or later reach subatomic physics.

Each science can interact with other sciences without losing its identity and the logic of its explanations, as in the case of multidisciplines. For example, psychobiology is a multidiscipline, in which two sciences interact to solve a problem posed by psychology, with the methods of biology (Ribes, 2018).

There are other more complex interactions between sciences, which are referred to as interdisciplinary and transdisciplinary. The first case concerns the merging several basic sciences with the aim of creating a new object of study, usually of a technological nature (e.g. medicine). In the second case, disciplinary boundaries are transcended and dissolved in order to achieve a highly generalised and/or cross-disciplinary understanding of a wide range of natural phenomena, regardless of the level of organisation of reality at which they are located (e.g., logic and mathematics).

Another type of interaction insistently pointed out by Kantor (1971) is that between the sciences, and the cultural institutions from which they have emerged as specialised practice. This interaction is minimal in the case of established sciences (for example, quantum physics has no correspondence with common sense), but in the case of disciplines in consolidation, the presence of cultural institutions is especially invasive and disruptive. This happens because cultural institutions (e.g. religions) impose their terms and criteria, hindering contact between events, and the postulation of analytical concepts for scientific construction. Although more difficult to recognise, technological developments in other sciences (e.g. computer technologies, and their vision of the human-computer), also come to hinder the progress of some disciplines towards their consolidation as sciences. Unfortunately, psychology has been a victim of the imposition of cultural institutions for more than two thousand years.

Sometimes a criterion applied to assess the degree of consolidation of a science lies in its possibilities of application, and derivation of specialised technology. Even though history shows that the relationship science→technology is not linear, cases in which the dependence of technology on the development of basic science is identified (for example, the photoelectric effect and the automatic closing of elevator doors) are taken as an indicator of consolidation. In most cases what can be verified is an intense communication between basic science and associated technologies.

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In the case of psychology, in its long process towards consolidation as a science, it has evidenced a relative independence between the basic science and the technology used in the areas of professional practice.. This has been exacerbated.

The psychology of the present century, with the replacement of basic research with "neuroscientific" research and the incorporation of "ethnographic" technologies in their areas of professional practice, with the blessing of the universities.

Psychology

Hayes and Fryling (2023) divide their work into two parts: (1) the foundations of interbehavioural psychology and (2) theoretical applications. The first part, in direct line with Kantor's (1958) thinking, presents recent reflections on meta-science and the science of psychology that trace a watershed between interbehavioural psychology and the rest of the disciplines that coalesce as institutionally recognised psychology.

The science of psychology postulates that the psychological behaviour of any human organism, or of other animal species, is progressively constructed as a continuum of interactions whose critical component is the reciprocal and simultaneous coordination of the functions of the organism's actions, the functions of stimulating events in the environment, and the historical factors and situations that influence the probability that each interaction will take on unique quantitative and qualitative values (Kantor & Smith, 1975). In this context, differentially orienting to a sound stimulus, looking at and manipulating an object, maintaining body balance and walking, listening, speaking, reading, writing, and talking to oneself are segments of the individual's functional interaction continuum, which are isolated for the purposes of scientific analysis.

Each segment of current functional interaction maintains historical continuity with all previous interactions of the individual. Thus, if the current interaction has a long history of direct and indirect interactions, the individual's action in the face of current stimulus events and situational factors will be considerably more specialised, flexible and adjustable than any other possible response.

A significant proportion of human psychological interaction is organised through the use of conventions and norms for coexistence, exchange, collective order. That is to say, as the individual moves through life through the different institutions that make up society and the institutions that make up society and culture, he/she also moves through different language domains, acquiring a linguistic competence with a breadth and diversity proportional to the variety of institutions with which he/she relates historically and on a daily basis.

The most notable linguistic interactions are observing, listening, speaking, reading, and writing. The first three are learned mainly within child-rearing practices, which in turn are the basis for the learning of reading and writing skills within school settings.

It is particularly relevant to note that, from this approach, the development of the functionality of human behaviour occurs to a large extent in the educational institutions. For this reason, systematic analysis and technological developments in psychology are particularly relevant for the design of teaching situations that guarantee learning. Consequently, multidisciplinary collaboration is the way forward in this case.

On theoretical applications

Hayes and Fryling (2023), congruent with Kantorian thought, conceive as a scenario of theoretical application, the conceptual reflection on the logic of the construction of psychological theory about interactions with non-apparent events, linguistic interactions, memory, the self, feelings, human development, family values, and morality. This can be understood from the fact that the Kanorian approaches are not a psychological theory in themselves, but constitute the guidelines for the construction of a psychological theory considering the substantive phenomena that psychology has to analyse.

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The technological concepts that can be derived from conceptual and empirical work within these areas of theoretical application have continuity and congruence with the same foundations, and therefore open up important possibilities for communication between the basic and applied areas, fluid and without the need for translation, since they employ the same conceptual logic.

It should be clarified that the direct use of theoretical concepts in the applied fields is not possible, since these concepts are synthetic, i.e. they are abstractions that capture the regular or general nature of the events studied, and consequently their use with respect to singular or unique events would be meaningless. Technological concepts must comply with a new synthesis between the synthetic concepts of basic science, and the terms from which the problems under study in the applied field are referred to.

Educational psychology

From this logic, educational psychology, as a technological derivation of psychology, has the commitment to extend the empirical principles of the science of psychology to particular school situations. Likewise, it must make use of the technologies that converge in educational practice, and generate its own models and instruments.

In the educational context, pedagogy is in charge of the design of group teaching conditions, while psychology must guarantee the achievement of individual learning. To this end, psychology must synthesise the empirical principles on the development of intelligent behaviour, personal styles and motivation, analysing how they participate in the learning of competences for coexistence, exchange and collective order (Ribes, 1990; Ribes and López, 1985). Complementarily, it must design a conceptual platform that allows dialogue with the other participating disciplines, avoiding the overlapping of terms, and merging with ordinary language.

In the educational field, several commitments and assumptions are accepted as necessary for the educational act to take place, some of these are: (1) conceiving teaching as an interactive process, (2) evaluating learning with reference to objective criteria and standards, (3) minimising the repetition of thematic content in order to promote learning, and not only memorisation. Although they seem to establish a firm ground, each of these points opens up a very wide and bogging down range of interpretations, epistemological, theoretical, methodological, etc.

Agreeing that the act of education is an interactive process says absolutely nothing, because the term interaction has multiple meanings, which vary, pointing to multiple aspects of teaching or learning.

Learning. The same applies to the concept of learning, the meaning of which becomes so diffuse that it ranges from watching an event to participating in "gamifying" tasks in an unclear way. This naturally hampers the possibilities of having precise and reliable indicators of the learning achieved and the most effective tools for its objective evaluation.

The interest in reducing rote interactions and strengthening learning interactions within the classroom is no different from the previous points. This objective is what sustains the interactive (folkloric) vision of what happens in the classroom. This interactivity is often reduced to verbal communication between students and teachers. Although it is true that a large part of educational practice (and the foundations of pedagogy emphasise this) gives communication the place of a fundamental pillar of education, in practice it is not restricted to this. The concept of didactic discourse (Ribes 1990) can help to understand this confusion.

In congruence with the interconductual foundations (Kantor, 1958, 1971) and the concepts of behavioural theory (Ribes, 2010; Ribes & López, 1985), Ribes (1990) has proposed that educational practice can be modelled as didactic discourse. Interactions that can be identified as didactic discourse must meet several requirements: (1) everything that happens in the classroom is interaction, at some level of complexity.

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That is, in the classroom there are necessarily physical, chemical-ecological, psychological, and social interactions; (2) didactic discourse is continuous with all these interactions, and is co-present with individual non-linguistic, social non-linguistic, communicative, and conceptual interactions; (3) didactic discourse always requires a minimum of communicative competence, but it is not reduced to this, so that the analysis of communicative interaction in the classroom is banal; (4) in didactic discourse, as in communicative segments, there are at least two individuals who play reciprocal, complementary and symmetrical interactive roles with respect to an event on which the didactic interaction is configured; (5) whoever plays the role of teacher must master what he or she teaches, in order to be able to lead the students to a certain achievement, regardless of the routes by which this can be achieved; (6)

The learner must be sensitive to the consequences of his or her learning actions, so that a motivational system can be established that leads him or her to pursue higher outcomes, including exploring strategies that enable him or her to self-teach new competences.

The didactic discourse constitutes a technological model, which encourages the systematic scientific analysis of the events that take place in the educational act, and thus dialogue with other disciplines based on their own concepts, not on notions, based on data, and not on speculations.

Strengths

The didactic discourse as a model of the educational act allows the episodic analysis of the activities within the classroom, so that the analytical segmentation of each and every one of the problems present in these areas can be located with respect to the relationships with other contemporary, simultaneous or successive events, locating the functional relationships that underlie them. Functional analysis avoids the practice of assuming that the problems in this domain are located in one person, either the student or the teacher.

The activity that corresponds to the psychology professional, according to this model, is to observe, analyse, model the interactions that currently occur, model the interactions that must be changed or established; and from this, to instruct teachers, students, and parents in the use of instruments and other technical resources that allow them to modify their behaviour tangibly. By doing so, users perceive that they are in control of the reported problems, making it more likely that they will adhere to the indications, thus avoiding unnecessary dependence on the professional.

The emphasis on psychological interactions, whether from actions or behavioural dispositions, offers alternatives, rarely explored in this field, so strongly dominated by the substantialisation of processes, the reification of psychological capacities (in mind, brain, personality or intelligence).

Weaknesses

The didactic discourse model, even if it was developed in the late 1980s, has few developers who, in a coordinated way, influence the psychological community. This sociological disadvantage is very great when considering the large number of professionals adhering to traditional conceptions of the educational act.

Threats

The greatest threat, beyond the lack of professionals trained in this model of analysing the act of education, is the policies that impact and shape education in much of the world. At one level, basic education policy is highly changeable and incorporates terms and concepts, relevant to the metaphorical interpretation of some social dynamics, as guiding axes. The terms "resilience", "well-being", "competence", "knowledge", etc., are not derived from scientific theory, are merely political jargon, and are therefore inadequate to guide meaningful empirical research.

At the higher education level, universities have progressively eliminated basic psychological research laboratories, replacing empirical and directly verifiable knowledge by students with readings from neuroscience, and some exercises demonstrating what is indicated therein.

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Kantor (1957) and Ribes (1990, 2010,2018) have insisted on the disorienting influence of cultural institutions on scientific work and its fields of application. In the past it was the ideological domination of all Western institutions by the Judeo-Christian religion (see Kantor 1963, 1969). Today, international policies have added to these influences, particularly with regard to aspects of population growth, alternative energies, and attention to human diversity.

Conclusions

Interbehaviourism constitutes a scientific metatheory, so its legitimate application is in the design of the theory of science, in particular the design of a scientific, non-transcendentalist psychological theory. One of the advantages of its adoption is that the conceptualisation of interaction in a cross-cutting manner with respect to all sciences establishes the possibility of communication.

The advantages of its adoption is that the conceptualisation of interaction in a cross-cutting manner with respect to all sciences establishes the possibility of communication between the sciences, without epistemological fractures as at present; and with respect to all manifestations of psychological life, it allows its theorisation without incommensurable parceling out, as is noticeable at present.

Interbehavioural theory in psychology is a reality, but it constitutes a minority. Sociologically, interconductologists are not very representative among psychologists. Even so, technological developments congruent with interconductual thinking have proven relevant and effective for a variety of problems in various fields of psychology.

It is important to mention that the contributions to educational psychology from interconductivism are multiple (Irigoyen, Cabrera, Jiménez, Martínez, Acuña, 2013; Martínez, Irigoyen, Cabrera, Varela, Covarrubias, & Jiménez, 2011; Varela, Cabrera & Irigoyen, 2009). The model of the educational act as didactic discourse is an alternative to current theories focused on personal attributes and not on interactions.

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