

## Tribute to Mariano Yela: Work and Behavior in Psychology

Helio Carpintero

Presidente de la Academia de Psicología de España

In the development of scientific psychology in Spain, following the tremendous rupture of the civil war, Mariano Yela stands out as one of the most active promoters of its institutionalization, and one of Spanish psychology's most prominent academicians and researchers (Carpintero, 2004).

His family, with very limited financial resources, lived in one of the most popular neighborhoods in Madrid. His father was a metal worker, and his mother worked as a caretaker in a modest home. He had endearing, happy memories of both, which he recounted in his autobiography (Yela, 1982).

Endowed with great intelligence, from his childhood onwards, he demonstrated his great capacity for study, as well as his ingenuity in finding resources to satisfy his desire to read. As a student, he showed a great interest in mathematics, which would play a large part in his later research on mathematical developments in psychology.

He was born in Madrid in 1921 and died in the same city in 1994. He belongs therefore to the generation of 1916, according to a scale by J. Marías (1975). Generations, the 'steps of history', are made up of people whose similarity comes from experiencing sharing common events and influences at similar ages. As a historical method, it has appeared to be fruitful in many fields, including the history of psychology (Carpintero, 2003). In our case, Yela, like his peers Jose Luis Pinillos, and Miguel Siguán, the philosophers Julián Marías and Jose Ferrater Mora, writers such as Camilo J. Cela, Miguel Delibes, and Luis Rosales, scientists such as Juan Oró, lawyers such as Eduardo Garcia de Enterría and Joaquín Ruiz Giménez, and so many more, all belong to a generation of people deeply interested in culturally and socially updating the country, but who were also radically affected by the civil war and the post-war regime that befell them.

During his youth, the country, was subject to multiple social and political tensions. There were also very serious labor unrest and clashes between a conservative Catholic mentality, and secular, often anticlerical thinking. Social and political conflicts ended up with the fall of the monarchy of king Alfonso XIII and the advent of a Second Republic (1931) (Carr, 1966). The new regime tried to modernize the country, but could not resolve the existing tensions, and eventually there was a military uprising followed by a civil

war (1936-1939) that ended with the imposition of a new, very conservative regime, headed by General F. Franco (1892-1975), that would last for more than thirty years (Bandrés, 2020). In 1975 a liberalizing movement succeeded in establishing the democratic monarchy that is still in place today.

Against this background, Yela completed secondary school, and participated in the war, defeated as a young republican. In the new situation that followed, he graduated in philosophy at the Complutense University of Madrid, and then studied psychology in the United States (1945 -1948). There was where he began on the path he would follow for the rest of his life.

### *Training*

His stay in the United States provided him with excellent theoretical and experimental training. First, he took advantage of the teachings of T. Vernon Moore (Washington), and then he specialized in the new field of "factor analysis", under a great figure in mathematical psychology, L. L. Thurstone (1887-1955), at Chicago University. He made numerous friends in Chicago, such as Lee Cronbach, Clyde H. Coombs, Raymond B. Cattell, and Horacio Rimoldi, among others. But his intellectual curiosity also led him to work on psychophysiology with William Neff, and on psychotherapy with Carl Rogers, the founder of client-centered psychotherapy who was developing his own system in those days.

On his way back to Spain, he spent a few months in some European research centers, particularly England –with C. Burt, Stephenson and Sir F. Bartlett– and France –with H. Piéron– consolidating his training as an experimentalist. This stage decisively influenced his personal project, prompting him to always demand a scientific and experimental psychology that he would aspire to establish in the Spanish academic world on his return.

### *Academic and research activities*

In 1948, he returned to Spain and soon came into personal contact with Dr. José Germain (1897-1986), a psychiatrist and psychologist who had already promoted early psychotechnology in the country in the pre-war years, hand in hand with Emilio Mira, with great international success. Mira fled into exile at the end of the war, while Germain found himself marginalized by the newly imposed political regime, as he was a loyal disciple of two well-known exiled figures, the philosopher José Ortega y Gasset and the psychiatrist Gonzalo Rodríguez Lafora. Notwithstanding, Germain was invited to create a center to promote research on

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Corresponding author: Helio Carpintero  
Academia de Psicología de España  
Conde de Peñalver, 45  
28006 Madrid (Spain)  
e-mail: secretaria@academiadepsicologia.es

experimental psychology at a newly created institution to develop positive science in various fields, the Higher Council for Scientific Research.

Germain succeeded in creating a small group of young people who were strongly attracted by psychology: Mariano Yela (1921-1996), José Luis Pinillos (1919-2013), Miguel Siguán (1918-2010), Francisco Secadas (1917-2012), Manuel Úbeda (1913-1999), and more. It was conceived of as a small Department of Experimental Psychology, within the recently-created Higher Council for Scientific Research. In the end it became the core of contemporary scientific psychology in Spain. In the official academic world after the war there was an attempt to establish a psychology school with a Thomistic orientation that failed completely, and Germain's core group strongly encouraged a scientific and technical approach that would ultimately predominate. (Carpintero, 2004; Yela, 1982).

The Department encouraged its members to interact with foreign research groups, which meant that Yela came into contact with Baron Albert Michotte (1881-1965), and his laboratory of experimental psychology of perception at the University of Leuven (Belgium). He did work there, between 1950 and 1952, on the perception of causality, and eventually Michotte invited him to be his successor in the chair after his retirement. However, he turned it down and returned to Madrid. There, in the early 1950s, he made great contributions to the foundation of the Spanish Psychological Society (1952), and also to the creation of a School of Psychology and Psychotechnology (1953) at the University of Madrid. This was the first postgraduate training center training certified psychologists who had previously graduated in other subjects such as medicine, philosophy, and education. This school, and a second one, created at the University of Barcelona by Miguel Siguán in 1966, highlighted the need to create a degree in psychology at universities. Germain's disciples (Carpintero, 2020), especially Mariano Yela, José Luis Pinillos, and Miguel Siguán, were the leaders in this process, and a degree in psychology was first established in Madrid and Barcelona universities (1968), beginning a rapid growth of the field that has established more than fifty faculties, a number that continues to grow (Lafuente, 2020).

During the same time, Yela engaged in technical and practical activity. He held a position in human resources in a large industrial company, Standard Eléctrica S.A., based in Madrid. This gave him important practical experience that would serve as a strong basis for his studies. He also worked as a scientific advisor for an important publisher of psychotechnical tests, the TEA Consulting Company (Técnicos Especialistas Asociados), which created a wide collection of assessment instruments, all adapted to the Spanish population, that enabled professionals in their work (Pereña, 2007).

For more than thirty years he was professor of psychology at the Complutense University of Madrid. In 1957 he was made chair of general psychology in the pedagogical section of the Faculty of Arts. When the degree in psychology was created, he moved to that, specializing in experimental matters. Eventually, a wholly independent faculty was established, largely due to his efforts and those of other colleagues, thus arriving at the current situation.

However, his academic activity was more extensive than that. For years, he maintained a regular presence at the University of Leuven (Belgium), where he taught factor analysis. He also gave numerous courses at the Pontifical University of Salamanca. His prestige continued to grow rapidly, and he attended a multitude of international meetings, seminars and congresses.

In 1973, he was appointed a full member of the Royal Academy of Moral and Political Sciences of Spain, an institution that in this way opened its doors to scientific psychology.

In the following years, he mainly did research on language and intelligence, but also paid attention to evaluation techniques and work psychology (Carpintero, 2017). He also was collecting the fruits of his previous labor, and was presented with numerous awards and distinctions, including a medal of Honor from the University of Louvain (1962), from the Pontifical University of Salamanca (1987) and from the Complutense University of Madrid (1989). He became an honorary member of the Official College of Psychologists of Spain, and also a member of the New York Academy of Sciences (1993). He received honorary doctorates from various universities –the Pontifical University of Salamanca, and the University of Oviedo, among others. The edition of a book in his honor, *Intelligence and Cognition*, (1992) was promoted by the Complutense University of Madrid, and had the collaboration of well-known national and international researchers and colleagues.

He was also an endearing personality. In 1955 he married M<sup>a</sup> Concepción García Morán, and they had five children, two of whom have devoted themselves to psychology, one as a university professor, and one as a professional in the field of legal psychology.

It is worth remembering the words with which, in his autobiography, he assessed his life experience: “My life, sometimes painful, often difficult, always uncertain, has been fundamentally a stimulating adventure” (Yela, 1982, p. 281).

#### *A view of psychology*

To understand the meaning of his intellectual work it is necessary to begin with his idea of psychology, which serves as the basis for the rest of his work. In a certain sense, it could be said that for him, the starting point for the task of a psychologist is the study of behavior through tests.

In a rather crude sense, it might be said that a test is no more than any action or operation that includes in itself an examination in which a subject is involved when behaving in a given situation. Its living activity consists of someone doing something with some object or with other people, and in each case certain data are needed to obtain some results. Every time a subject tries to do something, their actions test both their ideas and their circumstances. In an ultimate sense, life is a continuous testing process, in which both the subject and the world are put to test to get some goal or to arrive to an end. As Yela wrote, “conduct (is) an attempt, more or less successful, to face the world, question it, examine and interpret it and, less or more responsibly, dispose of it” (Yela, 1987, p. 26). In other words, each behavioral act, in a basic sense, “is a test” (Yela, 1987, p. 24).

When we act or operate, we test ourselves our abilities, our ideas and plans, and we are also checking the resistance and the nature of the world that is in front of us. We interrogate its reality, its meaning, and its possibilities. To act means to put reality into test, interpreting it and personalizing it (Yela, 1987). Such a process may have a plurality of aspects, discovering new possibilities, capturing the flavor and resistance of the situation, as well as the role of each portion of reality in our lives. Such investigative action may be quite diverse, and may also have a plurality of meanings; they depend of course on the occasion, and the attitudes and expectations of the agent.

Yela was a declared experimental psychologist, however he never failed to postulate the need for a descriptive, phenomenological approach, which would combine this viewpoint with the experimental and analytical procedures (Yela, 1960). He based this phenomenology on the work of Husserl and Heidegger, of course, as well as on Ortega, Merleau-Ponty, and Marías, to mention only a few names that frequently appear again and again in his writings. He considered himself to be close to that perspective and feeling. According to him, the phenomenological sense is linked to the order of the experience, the coherence and meaningfulness of behavior, or more technically stated, to the mathematizable covariation of responses. Definitely, he was led from phenomenology to factor analysis, recognizing it as a powerful instrument for analyzing the complexity of behavior: “*In my opinion, a clear example of this conjunction of phenomenology and mathematical models is, or could be, factor analysis*” (Yela, 1960, p. 901). It integrates mathematical procedures with structural aspects of behavior, and then, with its reflection, illuminates the meaning of actions and operations from where measurements were taken.

The subject’s behavior so considered is a sequence of acts, but these are not mere bodily movements; on the contrary, every action has primarily a certain meaning for the person who performs it. Yela’s idea of behavior was partly in agreement with the behaviorists, but disagreement arose immediately, as he could not accept the conception of an act as a mere stimulus-response structure. He rather acknowledged a much more complex reality, one in which a consciousness intervenes and brings a world of meanings and values that determine the action. In his own terms, human behavior is meaningful action in the world. It is significant for the subject, that is, subjective and mental. (It is) in the space-time world, that is, physically real. Behavior as action —Yela adds— “is both a psychophysical fact and a meaningful event” (Yela, 1987, p. 28; 1989, p. 77).

As Ortega wrote, and Yela quoted, every human action —not the mere activity of a certain bodily organ— is an operation that has both a *why* and a *what for*, a motive and a goal (Carpintero, 2019). He liked to repeat that in such events there is a conjunction of action and meaning. It is, no doubt, a process that takes place through the motion of certain bodily systems and elements, in its interaction with the environment. In all cases, it requires and consumes energy: It is a real and physical event. But beyond that, it also makes sense for someone, for its agent, the one who imagines it, plans it, describes it, justifies it, executes it and, finally, gets its result.

Behavior, Yela acknowledges, is not mere reaction, but a significant response, which absolutely fits the meaning that one gives to the situation one is experiencing at that time. “The primary situation is the exhilarating reality. The primary response is to the stimulating reality in which one is; for this reason, the answer is significant movement irreducible to pure spatial alteration. Behavior is ... psychophysical, where ‘psycho’ is equivalent to meaning or intentionality and ‘physical’, to corporeal structure” (Yela, 1963, p. 27).

In this precise context, he recalled some unequivocal texts by Aristotle, related to the way of studying the passions. In effect, as the Stagirite says in *De Anima*: “It is clear that affections are forms inherent in matter. So the definitions must be of this type: anger is a movement of such a body or of such a part or power, produced by such a cause for this purpose... On the other hand, the physicist and the dialectician would define each of these affections

differently, for example, what anger is: one would speak of the desire for revenge or something like that, while the other would speak of the boiling of the blood or the hot element around the heart” (De An. 403 to 25 ff.).

Here is also a question of combining, as Aristotle did, both a bodily movement and the goal a mind pursues through it—in our case for instance, the desire for revenge. Conduct therefore had to be seen as ‘embodied ideas’, “*logoi enyloi*” (Aristotle), or “*rationes insitae materiae*” (St. Thomas Aquinas); or, as Yela repeats in his oft-quoted formula, the “physically real meaningful action”.

This psychological view incorporates some lines that appear scattered in the past of the history of our science. It integrates in an original way some elements from phenomenology and from Gestalt with others coming from classical functionalism, behaviorism and even Tolman’s cognitivism. Consciousness, meaning and value, are combined with planning and behavior, in a peculiar synthesis that also tries in turn to fit with recent philosophical ideas on human life from contemporary philosophers that have been exploring it as is the case of the Spanish philosophers Jose Ortega y Gasset and Xavier Zubiri, and also of the German existentialist Martin Heidegger. All of those may be seen as phenomenologically based thinkers who explored human life and who greatly influenced Yela’s thinking, and led him to see human action as a continuous situated interaction between person and world (Carpintero, 2017).

It might also be added, to round off the point, that many of the suggestions that nudged Yela in the aforementioned direction came to him more or less directly from the thoughts of Xavier Zubiri, which greatly influenced his thinking. Zubiri maintains, in effect, that a certain real entity has basically a physical structure, or something “of its own” (“*de suyo*”), which makes it be in a certain definite way, and, at the same time, allows it to be inserted ‘in the whole of reality’ “as a such real thing”. But in the case of lived and humanized realities, that are given to a certain person, and that appear to him inside his life or existence, they also have a ‘sense’ or ‘meaning’, be it concrete or vague, individual or general. This sense, says the philosopher, “is precisely and formally the constructed character of things as a moment of human life” (Zubiri, 1962). For instance, a certain quantity of matter, found by a subject in his life, gets a certain role, sense or meaning, that on the one hand makes it a “thing-reality”, that can be observed, analyzed, experimented, measured and operated, but on the other hand, it also makes it a “thing-sense”, with a function and a meaning, providing the person with certain effects or results. Yela’s reflection brings the Aristotelian tradition and the Zubirian doctrine into an interesting convergence.

This idea of behavior has been quite aptly analyzed by G. de Montpellier, in a review of the idea of behavior in psychology. As he says there, “for Yela the structure of behavior is the unit of interdependence between the stimuli, the subject and the action. The interaction between the exciting, physical energy system and the subject defines the stimulating ‘situation’ in which the subject situates himself, according to the action that he projects and tries to perform. This action depends on the situation as the subject perceives and interprets it, according to his particular way of being that is, his personality. The action, in turn, works again on the stimulating situation, adapts to it or transforms it; and it also rebounds upon the subject himself, who affirms himself through it, and conforms to his nature. What is involved here, adds this author, as can be seen, is a really ‘subjective’ behaviorism” (de Montpellier, 1981, p. 243). Although this definition could be seen

as a true oxymoron, the previous considerations let us understand the precise sense in which Yela has tried to enlarge the natural dimension of behavior in man, with the idea of a meaningful and conscious experience that places man as a cultural and historical being in the middle of a natural world, endowed with a biological body, and subject to the energy processes of the cosmic world.

In particular, human action, as a real process, occurs in a place and a time in which its material entity intervenes; the organism puts the subject at the level of all other physical realities, in a certain here and now. On the other hand, every action is projected by the subject towards certain goals or ends that have a functional relationship with the life project he is trying to achieve that gives a sense to his subjective world based on past experience and his own ideals.

In this way, Yela attempted to integrate into a unit the plurality of proposals that have made psychology a *multi* or *pre* paradigmatic knowledge. He thinks that a solid, firm science needs to achieve unification, to become a body of propositions that explain and give reason for phenomena, while allowing prediction and intervention. In its simplest expression, it is about reaching a “unified psychological science”, which ultimately could give reasons for the action and expression of the subject through behavior, resorting to the concepts and constructs that are indispensable (factors, systems operations, etc.), but always checking claims and predictions by resorting to the “observable behavior of the subject”, the last criterion from which to prove or falsify the set of theoretical claims (Id., 1989, p. 76). This concept inseparably integrates “the physical and the mental” of the person, corresponding to the integrated nature of the person.

For humans, and especially for modern, contemporary humans, the meaning of life is, in large part, an effort to keep oneself alive, and to build one’s own personal figure through a variety of activities that modify the surrounding reality and consist of certain operations that transform one’s circumstances.

According to Yela, these structures have been shaped and organized through evolution, in a process of hominization of the animal, and humanization of humans. Little by little, the person has been adaptively obtaining answers to the continual new challenges of his environment. In this task, among many mental capacities, the role of cognitive functions stands out. A very considerable part of Yela’s work has been dedicated to the study of intelligence, as a capacity for abstract and relational knowledge. He also did interesting research on the perception of causality, developing some lines from the basic work of Belgian psychologist A. Michotte, with whom he maintained a close relationship. But there is another issue that is very directly related to the question of the meaning of life, and the project of existence that underlies all strictly human action. For the modern person, life acquires meaning as an effort to dominate nature, modify it and fit it to his needs, mainly through personal activity. That activity, when it is socialized, and becomes a regulated and socially recognized action, becomes the “work” of the person. When people have a job, this means that they take care of themselves and “produce some good valued by society” (Katz, 1954, p. 475). Let us now consider this central aspect of Yela’s contribution to psychology.

### *Psychology of Work*

As noted above, there had long been interest in the psychological aspects of work in Spain. Mira and Germain, in particular, had

already taken an interest in psychotechnology before the civil war, in one of the first approaches to modern psychology through the social aspect of industry and other social applications. Personnel selection, personal orientation and guidance, and workers’ rehabilitation had given social respectability to the modern theories about the human mind and behavior.

In Spain after the civil war, the small CSIC center created for psychological research under Germain’s direction focused fully on these topics (Lafuente, 2020). In particular they applied considerable effort to adapting specialized tests for different professions. These included adapting the test battery that the American Air Force had established for pilot selection, which would also subsequently be applied in our country. Other widely used international tests were also duly translated, published, and evaluated. This resulted in the Spanish edition of Thurstone’s PMA, now the AMPE by F. Secadas; the Ozeretski test, thanks to J. Pertejo; Eysenck’s EPI, through a renewed version at the Pinillos’ CEP; and, finally, Yela translated and adapted numerous tests from Thurstone (Faces, Hands, Screws, calculus, etc.), Raven, D-48, GCT, Gottschaldt, Wechsler’s WAIS, and many others.

Yela had gained significant practical experience by working in the human resources department of a large industrial company, that he continued advising for years (1950-1957), until he was awarded his university chair. From then on, he dedicated himself to research and theory, but he always tried to make academic tasks compatible with these applied issues of work and organizational psychology (Forteza, 1995).

His knowledge of factor analysis and his interest in psychological action and intervention, not only in its theoretical version, facilitated his activity in the various fields of psychology, and particularly in this one of work and organizational psychology (Yela & Yela, 2009).

To some extent, his vision was that of a factorialist. Factor analysis is a technique to analyze the scores obtained by a group of subjects in a plurality of tests. It enables technicians to extract the meaning underlying a set of measures, informing us about the similarities and differences, concomitances and covariations in the responses of a group of individuals or entities. It allows the researcher to point to the existence of some “factors” underlying all these scores, which for Yela are ultimately the “functional units” that would explain behavior (Yela, 1957). According to him, this analysis leads to establishing certain constants in the psychological structure of the tested subjects, namely, their personality ‘traits’, and also their capabilities in relation to certain tasks, activities, or occupations. Therefore, such a technique would lead us directly to the very core of the problem of work psychology, that is, to establish through the appropriate tests, the functional features of the different jobs, and the basic psychological features of people that would fit them. That classic problem in work psychology, placing the right person in the right place, which is the main goal of all professional selection and guidance research, would find a suitable, objective treatment using the factorial technique which would allow a response to those practical demands (Muñiz, 1995).

In 1949, Yela presented a paper at the International Congress of Applied Psychology held in Bern, on Factor Analysis in vocational guidance (Yela, 1952). In his opinion, both in vocational counseling and in occupational guidance —the two essential psychological tasks in the field of work psychology—, this methodology was able to go beyond the pure empirical statement of a certain

convenience between a person and a job position, having managed to determine, not only the subject's functional units but also the characteristic features of the tasks to be performed. In so doing, a scientific vision of the problem would have then reached, but a significant change would have then taken place, as research would have moved from psychometrics to the field of personality and clinical psychology. By assuming this factorialist point of view, the terminological unification in this field was consistently encouraged, and this opened new horizons of prediction of adjustment to new and different contexts, far from the usual, albeit necessary ones. To do this it was necessary to admit the hypothetical condition of the supposed 'factors' or accepted traits, but this appeared as a normal requirement in any hypothetical theory, which needs to be validated by empirical verification, experimentation and convergence with other related theories.

#### *An overview of the field*

Yela published a systematic body of doctrine about the psychology of work in 1954. It was presented in a chapter entitled "The psychology of work", included in the Spanish edition of David Katz's, *Manual de Psicología (Handbuch der Psychologie)* (1951), a collective work directed by the Danish psychologist, with the collaboration of many distinguished European psychologists, such as Eino Kaila, Richard Meili, Jean Piaget and many others. It also contained a foreword by J. Germain. Yela's chapter offers the core of the field of that specialty, and has served as a reference for numerous Spanish professionals and researchers on the subject. It is also true that, as some critical reviewers noted, its status as a chapter in a handbook on general psychology undoubtedly reduced the impact that it could have had (Forteza, 1995). The modernity of the approach it offered has also been noted, as the idea of 'work' had been placed at the center of all the questions, an idea that has been a focus of attention since the 1970s, but that was not emphasized at the time Yela was writing it.

It begins with a conceptual outline of work in the following terms: "work is a social situation in which a person, to a greater or lesser extent voluntarily, forcedly, or compulsorily, produces some good valued by society" (Yela, 1954, p. 475). There are several significant characteristics of that position that are worth mentioning. One is the adoption of a behavioral perspective. Work is, for now, a behavior, an activity. But as it is also something appearing in a social situation, within which certain values appear. It is then related, not merely with effects, nor with things, or products, but with 'goods' or entities which are 'bearers of values', as the philosophers of the *Werttheorie*, or philosophy of values, stated. Precisely because it is a behavior that produces goods, and more or less goods, it is logical to contemplate it from the point of view of productivity. Certainly, workers' behavior has been considered from this point of view possibly from the most remote times, but scientifically the viewpoint was mainly due to the work of F.W. Taylor at the very beginning of the 20th century, at least in his most striking expressions. Taylor, apparently, tended to view the producer as a machine, as a factor in the transformation of raw materials, and not properly as an individual who is self-realizing in his existence through work. Quite the opposite, Yela considers 'work' as a human 'performance', and he perceives it from a perspective that can only be described as 'humanist'. The clue was already in the first article mentioned above. Indeed, it was said that psychology now applied to the field of work was

undergoing a profound change: "It would seem that this change of emphasis in applied psychology from occupations to men, from efficiency to personality growth, from economics to social balance, is a particular symptom of a wider and deeper change in psychology as a whole" (Yela, 1952, p. 476). Instead of dealing with occupations, it had turned to people, individual men and women. And for that reason, he also says, the emphasis in this field is changing, going from professional orientation (occupational guidance) to vocational counseling, emphasizing above all the personal dimension of workers, their vocation, and also their personal growth, not only their aptitudes, abilities, and skills, but also their aspirations and ideals, in short, their 'ideal selves' in terms of W. James. Perhaps on this point, Yela's training with C. Rogers in the U.S., at the time of his immersion in factor analysis with Thurstone, was more or less consciously influencing his spirit. In this way, instead of talking about job performance, he would prefer to refer to its 'effectiveness'; and with that expression he would be pointing not only to economic productivity but also to the worker's self-realization through work, or, in other words, he would be considering work as a key factor in the meaning that life — 'meaningful physical action' — has for the worker. As Yela writes: "profession is a medium for the expression and growth of personality" (Yela, 1954, p. 476). In other words, it is an effective factor that favors the development of the worker's personality. Far from man-machine mechanicism, here the psychologist is consciously dealing with a personal being who is self-actualizing. Going far beyond Taylor, Yela has embraced the ideas of Rogers, and also those of the philosopher Ortega, for whom life is a process of self-realization.

We are, therefore, looking at a work psychology that, while focusing on behavior, manages to include the integral reality of the person. This is undoubtedly what his thesis was suggesting: Instead of professional orientation, we would have to focus on each person's personal vocation.

But a person-job situation analysis, apart from focusing on personal activity from the perspective of its existential meaning and its social appreciation, must also be measured as a physical reality, that consumes energy, has a positive or negative impact on health, and requires a series of tasks to be done, which are studied and summarized in an objectively constructed job profile diagram. Work psychologists need to have an objective description of tasks and professions with which to compare the physical and mental abilities of the people who have to do them. A whole network of professions is then needed, whose peculiarities and requirements will be analyzed in detail. The defined tasks in each case will involve testable operations, evaluated through valid and reliable objective tests. In this point, Yela gives brief but illuminating ideas on test methodology. Moreover, as some of the involved operations are subject to learning, he also maintains that all the related behaviors should be taught to people as carefully and effectively as possible. This teaching should not just focus on physical training but to a real process of a well-designed socialization within the group. People who should perform a job should be guided by their future foremen. In such a way, Yela states here the importance of all information referring both to the principles of action and to its results. In this task of adjusting people to any work situation, Yela proposes to apply a multi-level procedure with a series of levels adjusted to the problem: adaptation and control of stimuli and of environments; analysis and adjustment of times and movements; social adjustment to work dimensions of stability and instability;

salary problems... In short, he outlines an essential system of human relations.

Yela's analysis of the human work situation continuously focuses on the interactions between people and their surroundings. From this basic level it rises to consider how the operating subject gets to build his life in a meaningful way for himself. Although a synthetic view of the human work problems, this work offers a deep, integrative vision of the field, based on a well-meditated theory of human behavior, in which its physical dimensions are connected with their related meanings and values, essential constituents of every human life as such.

In conclusion, a first characterization of Yela's study of the psychology of work should necessarily underline its personal and integrative nature. While there is a remarkable attention to methodological techniques, including factor analysis, it is his humanist vision that is the core of his contribution to this psychological theory.

Yela's psychological construction essentially integrated behavior and subject. Indeed, he considered work as a behavior, without ignoring that it has meaning and value for a conscious subject. As we have already seen, he consistently maintained his idea of behavior as a physical, significant action of a subject, in what has been called

"subjective behaviorism". He then assumed the biophysical nature of the human person, who keeps themselves alive through conscious, purposeful behavior. He wrote "in fact the task of psychology as far as occupational life is concerned should be not so much to procure the adjustment of man to occupations as to procure the adjustment of occupations to man" (Yela, 1952, p. 482). He was postulating here a sort of Copernican revolution from the Taylorism approach that would acknowledge the central position of people in both applied and theoretical psychology. The recent "Universal Declaration of Ethical Principles for Psychologists", approved by the largest international psychological associations (Gauthier, 2020) maintains in its first principle the same spirit of "respect for the dignity of persons and peoples", stressing the centrality of the person in our scientific field. This principle, new as it may be seen, is at the same time many centuries old: "The sabbath was made for humankind, and not humankind for the sabbath" (Mark, 2, p. 27).

This humanistic view of psychology also maintained a rigorous and scientific standpoint. Yela, as a loyal follower of Galileo, could have repeated the master's teaching: "measure what can be measured, and make measurable what cannot be measured". Humanism, and scientific strictness are the two poles around which Yela's thought always revolved.

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