



Towards A Less Dogmatic Psychological-Scientific Task

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Abstract

All areas of knowledge were influenced by the great discoveries of the natural sciences, according to Bachelard in the formation of the scientific spirit, to be a cultured man, it was no longer enough to know something about philosophy, now it was necessary to know about that new experimental philosophy, so laboratories were born, but those summoned were many, and those chosen were very few, Some of them were prestigious scientists at the time, recognized by the scientific academies, but their "discoveries" have been buried by history. Framed in scientific euphoria, the nascent psychology with Wundt, had in mind, to make psychology a science, we dreamed of discovering natural laws for the field of psychology, we embraced the scientific method and began to apply it rigorously, we sought the objectivity of terms, the objectivity of theories and we condemned as metaphysics those theories that were not based on observation; But more than a hundred years later, in the histories of psychology there is a disenchantment, because we have not "discovered a single scientific law, similar to physics", in addition to the above, applied psychology has forgotten the rigor of yesteryear to see a more unified field, less methodologically rigorous, although these social changes also imply new dangers and challenges.

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Part 1 - Will We Ever Find a Natural Law?

Ever since Wilhelm Wundt founded the first laboratory of experimental psychology in 1879 and formulated a properly psychological object of study, and claimed the status of psychology as a science, from that day many of our problems that psychology drags like ghosts began. It was Comte himself, who disqualified psychology as a science by considering the introspective method as totally opposed to the spirit of positive science. Without the slightest doubt, Comte considered that science had gone through a series of theological and metaphysical stages, and that it had reached its peak in the scientific stage, this point of advance has been achieved thanks to the fact that the scientific or positivist spirit is based on "observation", in this new stage of science: "facts are bound up according to ideas or laws of an entirely positive order, suggested or confirmed by the facts themselves, but without instituting any hypothesis which is not of a nature one day verifiable by observation".¹ In Comte, direct observation becomes the anchor point to differentiate the positive sciences from the metaphysical sciences.

From that day on, observation became a key part of the "scientific method", an idea that has been repeated continuously, Comte understood by observing "the direct examination of the phenomenon as it naturally occurs",² in Comte's logic, observation has an objective "to see in order to foresee". The new science lays its methodological foundations in Francis Bacon's text: the "Novum Organum", as he himself warns, is easy to explain, but difficult to practice: "I propose to establish progressive stages of certainty. I keep the evidence of the senses, aided and protected by certain corrective procedures. But I reject most of the mental operation that follows the act of the senses, and instead I open and place a new and safe path for the mind to follow, starting directly from simple sense-perception. To a large extent, taking the "evidence of the senses", "the direct examination of the phenomenon as it naturally occurs",³ such ideas were reinforcing the role of observation as one of the key pieces in the process of knowledge, and thus the steps of scientific work were naturally conceptualized <<as Bacon had imagined it>> in a methodical inductive procedure.

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Astonished by scientific discoveries, philosophers of science such as Bacon and Comte, in their illusion, believed that they were interpreting the keys to the new philosophy of nature, and extracting those methodological steps that would allow us, like the physical sciences, to start from a **small number of fundamental mathematical laws and to be able to deduce the regularities that we observe in nature** >>The laws of universal gravitation made it possible to accurately describe and predict the movements of the planets>> the world was dazzled, as described by Bachelard⁴ many felt called upon to carry out this new form of experimental philosophy:

In the eighteenth century, science is of interest to every educated man. It is instinctively believed that a natural history cabinet and a laboratory are set up as a library, depending on the occasion; there is confidence; Individual findings are expected to coincidentally coordinate on their own. Is not Nature coherent and homogeneous?... The gentleman who in the past was satisfied with a little voice and a good demeanor in order to make himself known in social circles, is now obliged to know at least a little of his Réaumur, his Newton, his Descartes.

The new experimental philosophy was a source of production of new experiments, of new research, enthusiasm took shape in the proliferation of scientific academies in different countries, the shelves were quickly filled with scientific journals, science advances at a dizzying pace! but among the many summoned, there were very few who could go down in history – the growth of experimental reports is not synonymous with scientific production – as he narrates Bachelard⁴ many theories established a continuity with immediate observation, and with it theories based on common sense; for example, Franklin who thought of the electrical phenomenon on the idea of the basic experience of the sponge, in Descartes the metaphysics of space is the metaphysics of the sponge, the earth is the center of the universe and many other theories that were successful and called "scientific" at the time, but today they have come to occupy a place in a museum of the misunderstandings of science. However, Bachelard⁴ does not cease to wonder what differentiates modern science from the scientific work of the eighteenth century:

Open a modern science teaching book: in it science is presented as referring to an overall theory. Its organic character is so evident that it becomes very difficult to skip chapters. As soon as the first pages have been transposed, common sense is no longer allowed to speak; the reader's questions are no longer answered. In it, the *Dear Reader* would gladly be replaced by a stern warning: Attention student! The book poses its own questions. The book rules.

Two aspects to highlight, firstly, only a select group are considered the founders of classical science Galileo, Kepler, Newton,

we must imagine that behind them there are a large number of "scientists" and "scientific theories", some of them venerated as scientific, awarded by the academies; but some are part of the pre-scientific spirit; Secondly, the scientific spirit marks a break with common sense,-- there is no continuity but rupture-modern science has moved into a very different field than mathematical abstraction, to put it another way, mathematics is the language of nature.

The physical sciences stand as the most complete form of knowledge, and the way of proceeding is called the "Scientific Method"--Newton personifies the scientist par excellence--who with only three laws of motion and the law of gravity under his arm, made the mysteries of nature and the universe accessible to the understanding of human understanding.

Swept away by the euphoria of science, psychologists are excited about the benefits that the new method could bring to psychology:

The perplexed student might insist that the problem would surely be solved by a more rigorous and energetic application of the *scientific method* to the questions posed. It's a natural response, but it's not new.

For almost two centuries, all those connected with the past state of psychology clamored for the scientific methods of the advanced sciences to be followed. Arguing that only by imitating these methods could one hope to obtain the same discoveries and the accumulation of scientific knowledge.⁵

In the perspective of the new horizon, Wundt taught in 1862 a first course entitled "Psychology as a natural science", the new scientific work was led to the creation of laboratories, measuring instruments, several of them exported from physiology.

Almost a century and a half have passed since the foundation of the first psychology laboratory, and surprisingly we continue to repeat the same illusions, take for example the historiography of Nevid J *Psychology concepts and applications*,⁶ the following statements are established:

Common misconceptions about psychology myth done

Psychology is not a true science	Psychology is, in fact, a true science because it is based on the scientific method.
There can be only one certain psychological theory; all others must be false.	No one theory represents all forms of behavior. Theories are more or less useful insofar as they represent the available evidence and lead to accurate predictions of future behavior. Some theories represent certain types of behaviors better than others, but many have value because of their representation of some forms of behavior. ⁶

The "**scientific method**" becomes the **criterion of truth** to be able to accept theories that are scientific, of those pseudoscientific theories, it is a bit strange, what Nevid understands as "scientific method" sometimes he uses in the singular and at other times he says it in the plural "scientific methods". The idea seems very simple, what is that wand of virtue that magically transforms us into scientists? That wand of virtue is the use of the so-called "scientific method", also known as the method of the natural sciences, experimental method, empirical method, positivist method, synonyms used historically. We particularly exported the method from the physical sciences to psychology, trying to emulate the same steps, without asking ourselves if such a method was suitable for the psychological field? For more than a century we have been going around in circles on this same idea.

Mental processes, private experiences, our internal world, from the perspective of Nevid⁶ "everything is behavior" of course the internal world continues to be a challenge to the extent that they are not available for scientific study. This explains the second myth; there can only be one certain psychological theory; all the others must be false, the answer is No!, in reality all theories represent forms of behavior; the different perspectives in psychology are behavioral, psychoanalysis, humanism, physiology and sociocultural, each of them works with behaviors, the point of difference is that some theoretical positions in psychology represent better certain types of behaviors than others. For example, the case study has a wealth of information, unfortunately lacking the controls required of scientific experiments.

Where do these ideas come from? These ideas are very close to the ideas of logical positivism:

Logical positivism was the philosophy of Carnap and his followers in Vienna, who insisted that all behavior should be described and explained exclusively in terms of its physically observable manifestations <<All claims of psychology describe physical events, e.g., the physical behaviors of humans and other animals>>⁷

The problem of making psychology a science was faced with the serious problem of the terms used in the psychological field; consciousness, introspection, unconscious psychopathology by <<wherever one looks>> we find concepts indebted to subjectivity, internal world, philosophy, while the new scientific method demanded only one thing to be practiced: observation! but immediate observation in psychology faces many difficulties, how to exorcise the psychological terms of all that mentalistic heritage? To achieve such objectivity, the subject acquires a new dimension when it is posed as a problem of terms, as a problem of language.

Precisely, the project of logical positivism aimed to establish a **criterion of truth** that would clearly demarcate science/non-science – the Vienna Circle as they are also known – takes

as its central element the language used by science, inspired by Wittgenstein's first era, where language is a reflection of reality. The limits of language are the limits of reality, what cannot be designated cannot be thought and therefore is meaningless, in an early Wittgenstein only what makes sense can be formulated. Some of these ideas were the source of inspiration for the logical positivists who, by establishing the principle of "**verifiability**"--the translation of terms into observational language--with all this sought to clarify the language of theories--and thereby exorcise mentalist terms from the field of psychology and science.

The positivist propositions had their faith in the **autonomy of the facts**, in a total separation between subject and object, the facts captured by sensory impressions impinge from the outside on a passive observer independent of his consciousness, as they established "the facts speak for themselves", paraphrasing and changing some words of Carr:⁸ "Somewhere there was a mistake. And the mistake was faith in that tireless and endless accumulation of rigorous facts seen as the foundations of psychology, the conviction that the data speak for themselves and that you never have too much data. and the only way to be able to look beyond it is to observe through the **Theory**, it is the theory that gives meaning to the observations, the theory decides that we can observe, in this regard Hergenhahn⁹ writes in his book *Introduction to the History of Psychology* highlights:

From its beginnings, the highest authority of science has been **empirical observation** (the direct observation of nature), but science involves much more than the simple observation of nature. For observations to be of any use, they must be ordered, or classified in some way, and similarities and differences from other observations must be pointed out. Having pointed out the similarities and differences between observations, many scientists go further: they try to explain what they have observed. Therefore, science is often characterized by the fact that it includes two central elements: 1) empirical observation and 2) theory.

The role of theory has been redimensioned, without theory the data grow anarchically, theory is responsible for generating hypotheses for experimental testing, it is the guide of new predictions to be confirmed or rejected.

Hergenhahn's ideas in *Introduction to the History of Psychology* seem to be supported by the ideas of Popper, K, as Popper establishes that scientific work does not have observation as its starting point, science proceeds in a deductive way, highlighting as a criterion of demarcation the **principle of refutability or falsifiability**, A scientific theory must be refutable, we must show the falsehood, the limits or the misunderstandings of the theories: "Theories usually contribute something because they are correct, but because they are wrong... Therefore, the popular notion of a theory must be true for it to be useful is not correct".⁹

From Popper's point of view, science must make **risky predictions** so that they can be refuted, as in the case of Einstein, the theory accurately establishes the prediction of a series of facts: Hergenhahn⁹ comments: "Many of the theories in psychology do not meet Popper's refutability test, either because they are stated in very general terms, that confirm them with any observation." Despite all the problems that the principle of refutability has, Hergenhahn's book continues to emphasize that the mission of science is to discover laws, he speaks of laws of correlation and laws of causality, the former allowing prediction, the latter allowing prediction and control.

As can be seen, Hergenhahn⁹ to the question is psychology a science? He is clearly optimistic:

Psychology has applied the scientific method with enormous success. Experimental psychologists have demonstrated laws of relationships between some kinds of environmental facts (stimuli) and some kinds of behavior; moreover, they have formulated rigorous refutable theories that explain these relationships. The theories of Hull and Tolman are one example, but there are many more. Other psychologists work shoulder to shoulder with chemists and neurologists who are trying to establish the biochemical correlations of memory and different cognitive processes. A few more psychologists are working with evolutionary biologists and geneticists to learn about the origin of the evolution of social behavior

Hergenhahn's⁹ optimism has its flip side, "however, even though some psychologists are clearly scientific, many others, **if not the majority**, are not", and adds other comments, he states that psychology should not treat the non-scientific aspects of the profession too harshly, and we should think that psychology is a relatively new science – approximately 150 years since the formation of Wundt's laboratory – is nothing. At another time, the physical and chemical sciences had the same problem, a series of concepts full of theological and philosophical elements, but these concepts were refined until they reached a scientific treatment.

On the contrary, in the Richardson K⁵ *To understand psychology*, the book writes it fundamentally for students who try to find some coherence in the "theoretical salad" that characterizes psychology, to the lack of a theoretical framework that can give meaning to the fragmentary investigations of the different currents. For Richardson, the current state of psychology is due to the fact that the rigorous methods exported from physics and the natural sciences have not achieved the fruits of knowledge that were expected.

Meanwhile, Hergenhahn tells us about the successful application of the scientific method in psychology, laws that relate some kinds of facts and rigorous theories such as Hull and Tolman, both examples of refutable scientific theories. For Richardson, such optimism is hardly justified. Richardson wonders: Where is

the error? Why has it not provided results? For Richardson, such a situation is the result of the application of a series of steps of the so-called **scientific method**, which psychologists rigorously assume, but they are the product of an **idealized process**, that is, historians of science have serious doubts that the great scientists of physics have rigorously followed such steps. Therefore, the so-called steps of the scientific method are not a totally adequate description of science as they practice it on a daily basis.

If the physical sciences have managed to achieve the great discoveries without resorting to the strict steps of the scientific method, what is the reason to demand that psychology rigidly assume such principles, as Feyerabend¹⁰ would say: "There is no method today, according to the most advanced methodology."

For Richardson the problem is not only methodological, the problem is the **presuppositions** that underlie theories and discoveries, the history of science is to a large extent the reflection of the presuppositions that a society establishes; thus, for example, the idea that the earth was the center of the universe, the severe criticism of religious ideas gave way to another social and ideological order and with it to new presuppositions. In general, all sciences are contaminated by non-scientific presuppositions. For Richardson, the only way to bring these presuppositions to light depends on criticism, to get out of the comfort of our schools, of our own journals, to doubt what we do, to doubt our practices, to extract through criticism those presuppositions that underlie our theories; Richardson has been influenced by Kuhn's ideas about the stages of scientific development:

In this sense, our presuppositions can be reinforced. Consequently, we should note that we can be exceptionally naïve and simplistic about these tests and reinforcements. But we immediately have to point out an obvious point: if psychology has to be unified like other sciences, it cannot have coexisting conflicting presuppositions; some (or all) would have to be rejected. But shedding them as a result of criticism or supplanting them as a result of research can be an extremely painful task, because it involves separating ourselves from our view of experience and moving closer to another. (1993, p. 196)

It does not leave any surprise, Richardson's book⁹ ends with the following words:

It is this synoptic view that psychology urgently requires in order to reconcile its differences and impose a discipline on its extravagances.

Beyond the authoritarianism <<in the name of science>> which can be seen in some of Richardson's paragraphs; The idea of achieving the unification of psychology would have a high cost, since to some extent it means eliminating those extravagant theories that do not agree with its epistemological presuppositions and

with its notion of science. A persistent question is what to do with theories that are not scientific, they are simply useless, in physics for example the famous theory of the luminiferous ether; such an element was supposed to allow the propagation of light through empty space, the Michelson-Morley experiments were fundamental to determine that the ether did not exist in space, what was the fate of the theory of the luminiferous ether?, at least in physics such a theory was losing validity. The same must be done in psychology, At this point Hergenhahn⁹ quotes Popper:

In historical terms, all theories, or almost all, are based on myths and... A myth can contain important advances in scientific theories. Therefore [I consider] that when a theory is found to be unscientific or to be "metaphysical" that does not reveal that it is unimportant or insignificant, or that it is "meaningless or meaningless."

Hergenhahn adds the following comment: These theories lack scientific rigor, but they are still useful. The theories of Freud and Adler are an example.

Richardson assures that the idea that scientists quickly abandon theories is a myth, he adduces multiple examples in which scientists adhered to their theories despite the fact that they are doubted, such is the case for example of Ptolemy's theory was published approximately in 150 A.D. and Copernicus' theory in 1543. that is, a few centuries had to pass; in Ptolemy's worldview, the earth was the center of the universe and the sun, the moon, the stars revolved around it. However, the misunderstandings of the same accurately describe certain celestial movements, such as eclipses. The change was radical with the arrival of the heliocentric theory of Copernicus, showing the great inconsistencies of Ptolemy's system, but it was not accepted immediately, they had to wait until the seventeenth century with the arrival of Galileo and Kepler, who gave the heliocentric theory as true, definitively replacing the Ptolemaic conceptions.

As can be seen; Doing science similar to physics is a very complex process! Psychologists were very naïve to think that the mere fact of following the methodological steps of the "method used in physics, would lead us steadily to the same successes that the natural sciences have achieved". At some moments, we subvert the nature of psychological terms, to translate them into an observational language, with that little linguistic trickery, we consider that the psychological object would magically be transformed into something objective; The only thing we did was to exorcise social relations and subjectivity, and instead we imagined an abstract subject without social, emotional, passionate ties, thus formulating a man-machine, more manipulable to experimental conditions.

From this point of view, psychology becomes part of the various sciences that deal with human behavior, and its goals are aimed at describing, explaining, predicting and controlling human behavior;

some definitions go further, considering that the purpose of science is the establishment of **scientific laws**, in such a tune psychology as a natural science seeks to establish those laws that govern human behavior. However, optimism, a text such as that of Whittaker J and Whittaker S¹¹ already in 1965 in the first edition in English, warns of some inconsistencies in the formulation of psychology as a natural science:

There are many difficulties that psychologists encounter in their efforts to understand, predict, and control or change behavior. Not the least of these is the complexity of behavior, particularly human behavior. In addition, there are problems of measurement or quantification in psychology that are different in many respects from those of the physical sciences. There are also difficulties in the use of the scientific method in psychology research, difficulties with the control of variables or factors that influence behavior.

What was a small rain, today has become a downpour, in every history of psychology the question arises: Is psychology a science? For example, Hergenhahn,⁹ Nevid J,⁶ Feldman R¹² state that "psychology is a science that has applied the scientific method with enormous success" or "it is science because it is based on the scientific method", we understand the answers in a political-ideological-social-professional sense.

Even the most optimistic stories, as one goes deeper, **doubts arise about the scientificity** of psychology:

In this way, psychologists developed a <<envy of physics>>. Assuming that physics was the best science, psychologists tried to apply physics' methods and pretensions to their object of study, and felt incapable when they were unsuccessful. Envy of physics is a hallmark of twentieth-century psychology, especially in North America. Psychologists engaged in a Newtonian fantasy. They said with faith that one day a Newton would emerge from among psychologists and propose a rigorous theory of behavior, bringing psychology to the promised land of science.¹³

In this regard, Hergenhahn⁹ quotes James (1892/1985):

... the lack of a single law in the same sense in which physics shows us what laws are, the absence of a single proposal from which it is possible to causally deduce any consequence [...] this is not a science, but only the hope of science.

In the same vein, Heidbreder offers the following comment:

Because psychology is a science that has not yet made an important discovery. He has not achieved a finding comparable to that of atomic theory for chemistry, the principle of organic evolution for biology, and the laws of motion for physics. Nothing offering a unified principle has been discovered or recognized.⁹

A science like **psychology that has not been discovered, a "natural law"** is not a science; we pretend to be scientists as in physics, we put on a coat, we create laboratories, we work with rats for greater objectivity, but in the absence of scientific laws in psychology it marks a turning point, and at the same time they open a point of reflection on what scientific work has meant and above all for the development of science itself. psychology, The ideas inherited from a nineteenth-century notion of science had become a straitjacket for the development of other psychological positions and even positivist positions, because we were stuck waiting for the arrival of that renovator called Newton, and of a revolution called Einstein, all these transformations are needed to rethink psychological work. This situation is the result of a larger problem, as Pérez Tamayo¹⁴ points out, such a gap is the result of a problem within the philosophy of science itself: "From then on, to the extent that it has remained in the same situation, ignoring the colossal transformation of the sciences in the last hundred years, The philosophy of science has been moving away from reality and has become what it sadly is today... an anachronistic and remote structure, with little or no relationship with contemporary philosophy and science" In that same anachronism, we must include that doubt that those who make history of psychological science have, when differentiating scientific and non-scientific theories, what we have at this moment are "psychological theories" and with them multiple, methodological ways of approaching psychological work and where the principle of research is that "anything goes".

Part II - Scientific Policy in Psychology

The title of this section may be contradictory to some, in a traditional way science has opposed politics, because while science seeks the truth, politics tries to hide it, with these arguments it was intended to safeguard the idea of a purity of science. But in these times, even science itself acquires ideological nuances and thus forms discussive forms that express power struggles in society, such is the perspective that we must adopt when visualizing what psychology has been as a profession. We must consider the growth of psychology as a profession before and after World War II; originally the meeting point was the American Psychological Association (APA) founded in 1892, Stanley Hall considered the father of American psychology and first president of the APA, together with William James, John Dewey, McKeen Cattell, Stanley Fullerton, the original objective of the association was to "promote psychology as a science" some of the founders considered the idea of a psychology with properly theoretical-scientific interests, without any link to practical concerns, but not everyone thought alike, some of the founders such as Cattell and Dewey had shown their interest in applied matters. These disputes increased, professional psychologists created their own association, breaking with the APA, but within the APA there were dissident groups such as the Society for the Psychological Study of Social Aspects, created by left-wing psychologists to promote political ideas.

The arrival of World War II was the definitive take-off of the psychological profession, at first when war was declared, psychology professionals closed ranks, the Committee of Psychology and War was created, such a conjuncture gave rise to a united psychology and promote the function of psychology in society.

With the end of the war, there are two great events, on the one hand, the APA promotes new statutes to be able to integrate the various associations in close votes, new statutes are approved, the new objectives of the APA are "to promote psychology as a science, and to promote psychology <<as a profession and as a means to improve human well-being>> ratify that new member do not need to present a publication of a research such as means of admission. On the other hand, with the return of war veterans, it implied a new social demand: "**psychotherapy**"; But the field was already occupied by psychiatrists and psychoanalysts, who could not cope because of the 74,000 veterans hospitalized, 44,000 were for psychiatric reasons. The Veterans Administration (VA) organizes a new profession of mental health, which has as its center the "clinical psychologist" thus educational programs were formed in the main universities to train psychologists in the field of the clinic, despite the reluctance of the APA it was forced to define the profession of the psychologist as a professional and define the parameters for its training.

Several of these aspects were discussed at the Boulder Congress (1949) where the agreed training parameters established that the new clinical psychologists should be trained as professional scientists; the idea of scientific training only reflects the control of academic psychologists, hence the constant criticism of the APA to reformulate the way of training professional psychologists. On the other hand, the psychologists' guild received the first attacks from psychiatrists, who opposed the interference of psychologists, as they considered that they were not sufficiently prepared for the field of mental health <<a field traditionally controlled by psychiatry>> and opposed the legal recognition of clinical psychology and psychological guidance. At that time, the letterhead of "scientists" was the spearhead to counteract the criticisms launched by psychiatry:

Psychologists, however, had to distinguish themselves from their closest rivals, the psychiatrists, who since the first appearance of <<clinical>> psychology before the First World War had feared that psychologists would usurp their therapeutic tasks. Therefore, instead of defining themselves as simple practitioners of a trade, like doctors, clinical psychologists decided to call themselves **scientific professionals**. That meant that college students who wanted to become clinical psychologists had to first train as scientists... The appeal of this model was to preserve for clinical psychologists the prestige of being scientists, while allowing them to fill all the vacancies created by the V.A (Veterans Administration) for psychotherapists.¹⁵

In fact, it is not the first time that scientific discourse has been used as an ideological discourse, psychiatry itself has been at the center of the hurricane for some time, as mental pathology increases in the territory and with it the medicalization of society, in this regard Allen Frances who led the committee that created the DSM-IV warns some of the consequences:

It would create tens of millions of false positives, new <<patients>> misidentified, vastly worsening the problems already caused by an overly inclusive *DSM-IV*. A gigantic process of overtreatment would occur with drugs that are unnecessary, expensive, and often quite harmful... [and] the inclusion of many normal variants under the label of mental illness, with the result that the basic concept of <<psychiatric disorder would be greatly blurred.¹⁶

In general, it fights for who is more scientific, it is crossed by economic and financing interests, such is the case, according to Leahey¹³ psychiatry tried to block the therapeutic practice of psychologists maintaining that they are not competent to diagnose or treat mental disorders" Insurance companies allied with psychiatrists, and they established that only psychotherapies performed by psychiatrists would be paid. The psychologists' guild argued in its defense, the monopoly by psychiatrists in the field of mental health and the need for laws of free choice by patients. The American Psychiatric Association (APA) filed a lawsuit alleging "intrusion into medical and business practice, although for the present case, the courts forced the insurance companies to pay for the services of clinical psychologists, this marks the beginning of many more disputes:

When clinical psychologists began to develop as psychotherapists, they entered into competition with psychiatrists and, consequently, with doctors. This was followed by several fierce battles (often in court of law) in the quest to establish what kind of services psychologists could provide. For example, should psychologists be allowed to determine that a person should be admitted to or discharged from a mental institution? Did they have the capacity to act as expert witnesses when mental health issues were tried in court? Could their services be subject to payment from third parties (such as insurance companies or government agencies)? Could state jurisdictions certify them as legal providers of mental health services? Should they be legally allowed to administer medications? It has only been very recently that clinical psychologists have won all their battles against psychiatrists, with the exception of the last one: psychiatrists are authorized to prescribe medication, but clinical psychologists are not. However, in 2002 New Mexico became the first state in the United States to grant psychologists the right to prescribe medication, followed by Louisiana in 2004.⁹

The Boulder model to train clinical psychologists as "scientists and professionals", today is surpassed by the same students consider "the scientific part as a boring task" and in general it is considered a mistake to have created psychologists with a methodology of physicists, all this, opens the door to a different training, taking with it a "biological turn" as it is in psychiatry. These new ideas have revived the old controversy between medical versus psychological treatments, between pharmacological treatments versus psychotherapeutic treatments; In all this discussion between psychiatrists and psychologists, the field of dispute has changed, at another time it was the field of "scientificity", the passage through the courts, pharmaceutical interference, marks a change in the axis, for issues increasingly of a political and economic order. In such circumstances, the profession itself begins to blur, it is not surprising, the danger of the autonomy of the psychological space, in the face of all branches of medicine, and neurology.

Finally, the space of human subjectivity is narrowing, the new theories do not want to know about the problems that afflict our psychic world, it is not surprising that Scull somewhat sarcastically points out; that just as in the past psychiatrists considered listening to patients as a fundamental job, now it seems that listening to Prozac is preferred to the joy of the pharmaceutical industry's pocket.

Part III - Diversification of Applied Psychology

In general terms, applied psychology has become the spearhead of psychological work, applied work marks the pulse of development in the face of the growing demands for services in society, demand for more specialized services in traditional areas of psychology and in new fields such as political psychology, sports psychology or the psychology of new sexualities. These changes have thus overflowed the traditional paradigmatic approaches, thus opening new questions about the different epistemological and methodological foundations that today underpin the applied fields. The first psychologists who formed the APA mostly thought that psychological work would be purely theoretical, hence a fear for the applied part, in a vulgar way they called them <<those small businessmen>>, today these groups have taken the reins of the APA, such a change is reflected in the 56 divisions, and where the largest number of members is found, in areas such as clinical psychology, neuropsychology, the association of social and personality psychology, psychotherapy, psychoanalysis, association of industrial psychology, health psychology, association of female psychology, psychological counseling. According to Feldman (2006), private practice occupies 33%, universities and private schools 28%, social service 10.6%, hospitals 8.8%, industry and government 6.3%, school districts 4.2%, in this new turn experimental psychology has practically disappeared, when in 1987 according to Whittaker 14.6% were dedicated to experimental psychology.

This new turn is also reflected in the way in which it moves away from theoretical discussions; such as the problem of objectivity, the problem of scientificity, if psychology is a natural science, the disqualifications between existing paradigms. However, in most works applied psychology is spoken of **as a science**, although it seems reiterative a **"true science"**, and this remarkable status of scientificity is acquired by the simple fact of using "scientific method", but be alert, we are not thinking about the famous steps of the positivist method <<the one that starts from observation to the formulation of laws>> in such texts **the notion of the scientific method has been reformulated and simplified** in the text by Nevid (2011) *Psychology: concepts and applications* describes the following steps of the scientific method:

1. Develop a Research Question
2. Formulating a hypothesis
3. Gather evidence and test the hypothesis
4. Reach conclusions. Use statistical methods

Coinciding with Nevid, the book by Feldman R (2005, p.27) *Psychology with applications in Spanish-speaking countries* when he writes about: "the scientific method states that it is the model with which psychologists systematically acquire knowledge, and understand behavior and other phenomena of interest, it consists of three main stages":

- 1) Identify questions of interest
- 2) Formulate an explanation
- 3) Investigate to support or refute the explanation

As we pointed out before, this reformulation and simplification of the traditional positivist method allows for remarkable flexibility, since it allows the notion of scientificity to be broadened, thus being more inclusive in relation to other theoretical schemes. Feldman¹² writes about the current situation of psychology:

However, the field is more unified than it appears at first glance... Psychology is a unified science because psychologists of all perspectives agree that issues must be addressed in order for there to be progress. As you contemplate these issues, be careful not to think of them in antagonistic terms. Rather, consider opposing views on each issue as the opposite ends of a continuum in which individual psychologists' positions usually fall somewhere between the extremes.

Nevid's comments⁶ go further, stating that no paradigm can be the sole owner of the scientific and all other currents are pre-scientific:

Each has something to offer to our understanding of human behavior, and none offers a complete picture. Given the complexity of human behavior and experience, it is not

surprising that psychology has explored numerous ways to approach its subject of study. It is also not surprising that many psychologists today identify with an *eclectic* approach to understanding human behavior—one that includes theories and principles that represent different perspectives. We must also recognize that contemporary psychology is not divided into schools of thought as precisely as it seemed to be in its origins. There is great opportunity for different perspectives to complement each other.

As can be seen, the idea of a less dogmatic scientificity opens the door to thinking about the different contributions that paradigms can offer to the understanding of the human being, and thus opens up different methodological approaches, which escape the idea of a single method.

Several stories speak of the awakening of the Newtonian dream, in the minds of some, psychology can never be a natural science, we are ten light years away from being a science like physics, psychology itself is a multiparadigmatic discipline like the social sciences or the biological sciences; In the manner of a kaleidoscope, we can visualize the various views that make up the psychological phenomenon. After the severe doubts about the scientificity of psychology, some texts ask whether psychology will be replaced by biology or neurophysiology, as is the case with medical sciences and in particular with psychiatry. The idea that clinical psychologists can prescribe medications as happens in some states of the American Union, is now a fact; These new horizons only tell us about the complex scenarios that psychology will have to face in the coming decades.¹⁷

By Way of Conclusion

The history of psychology is both historical memory, but at the same time the meeting point from which we stand, in more than a century of existence since Wundt founded the first laboratory, we are captivated by the amazing discoveries of the physical sciences. The formulation of laws that govern the universe and the prediction of celestial bodies dazzled the nascent scientific spirit of psychology <<but doing natural science is something very complex>>, even for the scientists themselves; No one warned us of such a situation and we established the project of making psychology a natural science like physics, but today the project is beginning to show its limitations, the revised histories warn of the absence of a law! Similar to the law of gravity, some authors point out that that messianic being has not arrived that allows us to rethink the psychological task and take us to the port of science. Rather, histories warn that psychology can never be a natural science, since our object of study has little to do with that of the physical sciences, psychology has never been unified, and it would be better to recognize the diversity of methods in psychology.

Finally, psychology has maintained its being a science, more for ideological than scientific reasons, calling oneself "scientists" has

been useful to belittle other ways of conceptualizing psychology, or against the onslaught of psychiatry. For some, we continue to revolve around the same age-old questions: What is the relationship between mind and body? Nativism vs. empiricism? Objective versus subjective reality? Faced with the remarkable limits of psychology as a science, some authors ask whether psychology will be replaced by neurophysiology? Will psychology finally be recognized as a social science?, these are some of the questions that open up for a possible future of psychological work.

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Conflicts of Interest

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