

## **TENDENCIES AND PERSPECTIVES OF PSYCHOLOGY AS A SCIENCE AND AS A TECHNOLOGY**

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### **Summary**

This article analyzes present trends and apparent contradictions between what have been considered well-grounded standards in psychological research and practice during the twentieth century and what seem to be new paradigms at the beginning of the twenty-first century. Fifteen binary pairs have been identified and commented on not as dichotomies but as polarities, that is, non-mutually exclusive extremes but two rather overlapped polar types that counterbalance each other. This is the realm of fuzzy logic where the overlap is expressed in probabilities or degrees of truth within a continuum where values may range from zero to one, from nothing to everything, from an

unabridged to an abridged version. The set of binary pairs examined is a) from “being-mind” to “being-time”; b) from logocentrism to deconstruction; c) from scientific to technological perspectives; d) from human behavior to human performance; e) from sound knowledge to sound achievements; f) from customer to citizenship orientation; g) from expanding to restricting entry into the field; h) from confidential reports to published papers; i) from long-term to short-term projects; j) achieving results from higher education to training; k) from generalizable theories to specific models; l) from deontological codes to normative standards; m) from subject matter to career paths; n) from research to evaluation; and o) from conventional classroom to e-learning. The classical approach when dealing with dichotomies oversimplifies the concept of set membership by flatly including or excluding an opposing pair. The approach advocated in this article ponders and expresses the extent to which each opposing pair may pertain to the same set.

## 1. Introduction

Most readers are used to following and understanding arguments that are introduced and commented on by the author in a linear manner. This follows the long tradition of rationality that has shaped the logic of modernity and modernism, both of which are a direct consequence of the Enlightenment and the Age of Reason. However, by the mid twentieth century the fragmentation of rationality and the advocacy of pluralism broke through and the art of collage became a metaphor for how human thoughts flow in the process of making sense and building meaning in an affluent society. The twenty-first century seems to be the age of postmodernism where arguments are set in motion as an audiovisual mosaic or a hyperrealist video clip and have become the advanced cultural standard. This article is based on such a framework, the right setting to produce and counterbalance courses of reasoning and action introduced, at first glance, as an unstable equilibrium.

Past and future are both artifacts of the mind. Present time is what we know while we stay breathing and being alive. The way readers may grasp this virtually complex but in fact simple idea requires another Copernican revolution such as that held in the sixteenth century. Then, sound knowledge set the sun at the center of the Milky Way and the earth was set down at the periphery, just orbiting as a planet.

By the beginning of the twenty-first century, most people still view their lives as the center of the biographical time elapsed, and each present moment is viewed somehow as a rather peripheral background, as a part of a continuum where instants may be added. Certainly, the reversed cognitive map is more reasonable and expresses real facts and, probably, it will be the customary frame of reference for most people and psychologists by the middle of the twenty-first century.

The present moment is unique, and fixes the center as the actual “zero hour.” It cannot be added because it is stable and shares the mathematical properties of zero as a cardinal number. The present moment cannot be divided because it is not a component of a larger unit. What matters is the present moment and there is no actual need for stockpiling large quantities of time. It allows the distinction between “the time” (which is unique and cannot be dissipated) and “the times” (which is viewed as plural and

people try to amass it). Each person, group, and nation orbits at the periphery and counts how much time has elapsed because there are watches and calendars ready made to measure and pile it up. However, human (and non-human) beings bring their own world into existence, live it out, and take it with them when they die, always in the fleeting and unique present time. This is what is meant by “being-time.”

This will be the next revolution, the make-up assignment in the psychological understanding of the life span of individuals, groups, and organizations. During the twentieth century “time” has been hypothesized as the fourth dimension and too many scholars and laypeople consider it is a hypothesis backed only by physicists. It entails, however, psychological consequences; some will be outlined in the different sections of this article. Advancing just one example, the distinction between work time and leisure time is unnatural and manufactured; the attentive and mindful person remains active, busy, all the present time, even while dreaming. Every person stays occupied with too many things at the fleeting moment and so any kind of occupation (at home, in the office, at the beach) is a way of spending all the available present time. Always at this present moment, diligent occupation, with or without purpose, is at once the instrument of wisdom and the secret of human well-being. So, the distinction between work and leisure times is given, somehow gratuitous but profitable. Contrast and discrimination appear when individuals or groups involve themselves in the thinking process; the outcome is that human minds make distinctions and utter words, and sentences that mean something to producer and audience. And so knowledge is a self-creation, because names, concepts, principles, procedures, processes are made and accredited by thinking always in the present time.

The focus of this article is the tendencies and perspectives of psychology as a science and as a technology. And this topic is approached through 15 binary pairs. Each binary pair introduces two distinct but related frames of references that have been used by psychological researchers and practitioners during the twentieth century. Pursuing such a contrast calls for remembering, in a fleeting glimpse, the typical figures produced and disseminated by Gestalt psychology: some people see the old lady at first glance, and afterwards the young woman. The consequence is an apprehension that enhances, on the surface, a perceptual dichotomy of the figure: each vision is fully meaningful but separately. However, there is another kind of apprehension that stresses the perceptual polarity in the image. Each vision is ephemerally true but entails the evanescent presence of the complementary image. Both are an actual but chimerical appearance. The apprehension becomes a matter of discernment and perspicacity. The four-dimensional reality cannot be fractured with impunity.

A similar line of reasoning and action is backed by the fuzzy logic where the overlap between opposing pairs is expressed in imprecise membership relationships within a rhizomorphous continuum where the extreme probability values may, for instance, range from zero to one or from nothing to everything, within the context of a precise equality relation. Each binary pair of predicates shares misty degrees of applicability and cannot be settled simply as being feasible or non-viable in psychological research or action. Each binary pair enters into the design of control systems in applied psychology. Separately and together, these binary pairs enhance an old diatribe between the alumni of Aristotle (stressing that a superb lecture is a monolog internally coherent) and those

of Plato (a suggestive lecture is a dialog, interactively diverse). It is a matter of keeping the mind still all the present time: reality is captured in the interplay of fuzzy materials and not so well through sharp distinctions.

## **2. From “Being-Mind” to “Being-Time”**

Conventionally, the concept of psychology can be traced back to an old Greek word, *psyche*, that originally meant “breath,” “soul,” “puff.” Parmenides (fl. c. 450 B.C.E.) set up the connection between thinking and being and Plato (427–347 B.C.E.) used the word *psyche* to identify the thinking mind as a separate and distinct entity that exists apart from the human body, that supervises it, and thinks about being. It was his disciple Aristotle (384–322 B.C.E.) who launched the expression “psychology” implying that it was a discipline devoted to the study of what it means and what are the consequences of “being-mind.” The influence of the Vedanta and Buddhism on his writings on subjects such as metaphysics as well as on psychology has been suggested occasionally. Allegedly he met some leading figures of Buddhism, Hinduism, and Jainism during the five years he acted as tutor of Alexander the Great. His replacement was Kalyana, a Jain guru.

For centuries this understanding of psychology as a discipline devoted to the study of being-mind continued, and it was deemed ancillary to philosophy, the main discipline devoted to the rational investigation of principles underlying “being-truth.” Such an ancillary status prevailed until the nineteenth century, pushed ahead by the strict dualism between mind and body enhanced by René Descartes (1596–1650). Later on, Edmund Husserl (1859–1939) recovered the idea of being-mind and forced an overlap with the idea of being-truth by placing consciousness, experience, mental phenomena, and personal intentions at the core of both psychological and philosophical studies. The method of psychological experiments was thus named introspection, which is observing and reporting upon the working of one’s own mind. Sigmund Freud (1856–1939) was a neurologist but insisted on this common view about the best way to study the ramifications of being-mind and postulating, for instance, the concept of a psychic apparatus to identify the mental structures and mechanisms involved. Bodily activities and the physiological underpinning were not excluded. However, their paramount interest lay in their relations to mental phenomena that derive from being-mind.

By the beginning of the twentieth century, in the U.S. there was a strong reaction against such a dominant school of thought that fixed introspection as the natural target for research in psychology. John B. Watson (1878–1958) stressed that all sentient beings are in fact organisms that respond to conditions set by the outer environment or by inner biological processes. So, under the term “organism” Watson merged both mind and body, since both are present as core ingredients insofar as an organism is alive. He succeeded first in persuading students and scholars on the campus and later businesspeople and customers that behavior is the basic unit of analysis and action in psychology. This move towards the study of objective and observable facts and the convergence with the natural and basic sciences was relabeled “behaviorism.” In a similar vein, some researchers specializing in physiology such as Ivan P. Pavlov (1849–1936) and Alexander R. Luria (1902–1977) reacted in the former Soviet Union. They reworded the issue of being-mind in terms of a secondary signaling system in the central

nervous system as well as in terms of the outcome of the social and progressive history of people.

In neurosciences this metaphor of a secondary signaling system has led to a non-introspective reading of the complex and paradoxical interface suggested between the brain and the mind. In a similar way the nexus with social history backed the reference to social consciousness as a substratum. In fact an interpretation was favored that overlapped being-mind to “being-social.” Carl G. Jung (1875–1961) postulated a quite similar overlap and insisted on notions such as “collective unconscious” or “archetypes” by stressing the interconnections between processes such as “ontogenesis” and “phylogenesis.”

Notions such as behavior, secondary signaling system, and collective unconscious were accepted as taken-for-granted metaphors that allowed setting aside cautiously the problem of the mind-body dualism. It also meant breaking off links with philosophy and establishing good terms with physiology. However concrete or abstract these notions may seem, they have produced important changes in the way psychology has been conceived and developed within the scientific and professional community in that competing schools such as Gestalt psychology and humanistic psychology have accommodated the objectivist emphasis by a steady insistence on the need for objective validation of experientially based hypotheses and predictions. It has also changed the conception of them that many young and adult persons held by the turn of the twenty-first century.

However, in the history of science, from time to time, connoisseurs taste old wines in well-preserved bottles and proclaim they are fine and exquisite. This was the case regarding the study of being-mind during the 1970s, which resorted to the metaphor of computers and information systems to build a new denomination called cognitive psychology, devoted to the study of cognitive process by making inferences from behavior, and not from introspection.

During the 1990s cognitive psychologists went a further step ahead and backed the study of wisdom, and so meditation came under scrutiny as a method that allows an experiential realization of being-mind functioning. As a result, a new notion started to break through highlighting the centrality of time to discern the interior of individuals to the core. A very old text by the Japanese author Dogen Zenji (1200–1253) became bedtime reading among those interested in the psychological study of the present time of human beings during their lives. As already indicated above, this text introduces a dynamic and somehow puzzling framework. Here are some noteworthy excerpts:

By “*Being Time*” he means that time is always being, that all that is, is time . . . We must consider each individual and each thing of the entire universe as One time . . . To state it briefly, all beings in the universe, while in a single line, are One time. Since they are “*being time*,” I am “*being time*.”

Dogen puts “being” on a level with “time,” and sets aside as mere indexical expressions the use of past or future tenses of verbs. So, being-time emerges as the fourth dimension that marks the life span of any vigilant individual. Consciousness comes out and flows and the psychological realization of what happens stands out as a matter of awareness

throughout the hyper-time that experiences and survives any person still alive. This framework of being-time preserves much-loved expressions such as psyche and behavior behind the scene. It conveys new emphases and expertise on the psychology of knowing, the psychology of experiencing, and the psychology of doing and performing, in the three instances unintentionally. It is probably a fresh psychological approach to setting aside the sequels of being-mind and a customary course of action for a better quality of life and well-being. The continuous activity of the mind generates time and personal fulfillment.

William James (1842–1910), widely regarded as one of the founders of contemporary scientific psychology, advanced some subtle distinction in this same direction in his *Principles of Psychology*. He reevaluated the psychological value of time and assessed it incisively as “*the specious present*”:

- “The only fact of our immediate experience is . . . the specious present.”
- “The prototype of all conceived times is the specious present, the short duration of which we are immediately and incessantly sensible of.”
- “We are constantly aware of a certain duration—the specious present . . . and this duration is the original intuition of time.”

However, the analysis of the complete argument shows that he was paying more attention to perceiving something *as present* in a given interval (that is, alluding to a short-term memory) than to perceiving the present as a durationless instant (that is, identity as a momentary appearance) that pervades the unique life of every sentient being. The expression being-time yields up its secrets, from psyche to mindfulness, from behavior to awareness as the basic units of psychological analysis. This perspective, however, has been set aside for a whole century. What seems now to be pushing ahead is a radical mutation that will probably affect the framework that may support empirical and psychological research throughout the twenty-first century.

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### **Biographical Sketch**

**Jose M. Prieto** is senior professor of industrial psychology at the Complutense University where he teaches and does research in the area of human resources training and development. In the early 1990s he introduced new information and communication technologies as a basic tool in the classroom in such a way that psychology students lacking the necessary competence in dealing successfully with Internet tools and protocols were invited to enroll themselves in another course. He is the present secretary general of the International Association of Applied Psychology (1998–2002) and he has been actively involved in national and international organizations dealing with psychology as a scientific or a technological discipline. He is fluent in English, French, and Spanish and has written about 140 articles and chapters on psychology related issues published in national and international journals, textbooks, and handbooks.