

Self-reflexivity, Recessivity and the Evolution of Psychology

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Abstract: *This paper supports the idea that the epistemology of Psychology had a relatively progressive line of development, and it was not only a constant swing between the primacy of two opposing perspectives: from out-side in and from in-side out. Although the recessive dynamics of these two metaphysical principles of Person Constructs Reality and Reality Constructs Person (Buss, 1978) was the critical marker of any significant paradigm change from the history of psychology, the development of psychological thinking has presupposed, in addition, a general evolutive path. I will demonstrate that these combined movements of alternation and progression form a unique complex sense of epistemological development of psychology accompanying the corresponding development of human personality level of self-reflection.*

Contrary to pessimistic views that interpret the reflexivity embedded in this dual paradigm shift to entrapping psychology to an eternal return, it actually propels the advancement of human self-reflective consciousness to a collective level of self-understanding.

The final considerations are made about the current mainstream of psychological research and unreflexively practices detrimental to the substantiation of a Humanistic Psychological Science, which has become vital in the Age of Artificial Intelligence.

Keywords: *(self-)reflexivity, recessivity, paradigms in psychology, AI, scientific progress.*

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Reflexivity is not an admission of the failure of objectivity;
it is an acknowledgment of the impossibility of achieving it.
(OpenAI, 2023)

Psycho-logic of psychological research

Psychology can be considered as the last scientific expression of the unique human ability to question. This time on itself, in a systematical, critical, and empirical manner. Its birth cannot be explained simply by the practical incentives for proactive adaptation that has driven the advent of the other natural and social sciences or *epiphylogenetic* technological evolution (Stiegler, 1998), ruled by the need to control the outer, material, and social, world. Nevertheless, wasting precious time to question yourself for adaptative success is impractical. However, people need it. It was the natural result of the evolution of human consciousness. In the positivist conception of science, reflexivity, “the propriety of the object of a scientific inquiry also being the subjects who carry out the inquiry,” is seen as a curse because it hinders the methodological replication of all three scientific tasks: explanation, prediction, and control (Flanagan Jr., 1981). Concerning explanation, it raises the problem of the possibility of an objective depiction of phenomena in which the researcher is involved, participates, and identifies himself. Related to prediction, reflexivity leads to the plight of self-fulfilling prophecy. The hypotheses proposed to be tested become part of the informational environment that affects people's behavior, which could act differently without such information. Ethical considerations complicate the control task. As long as we consider people self-reflexive agents, we must treat them as ends in themselves and not manipulate them for other goals. Fortunately, with the development of human consciousness through collective thinking, science did not stop at the reflexivity level. It reached the level of collective self-reflexivity: “the propriety of the scientific subject to become the object of scientific inquiry.” This ability is crucial for the foundation of human psychic science and, indirectly, for strengthening the objectivity of all other sciences. It renders possible the meta-cognitive process of reasoning on reasoning, not only on methods and results, which controls and strengthens the methodological objectivity of scientific inquiry. Without self-reflexive ability, the capacity to question its reasons, incentives, and ways of reasoning, objectivity in social and psychological sciences would be *flatus vocis*. “The astonishing hypothesis” - “a person’s mental activities are entirely due to the behavior of nerve cells, glial cells, and the atoms, ions, and molecules that make them up and influence them” (Crick, 1994, p. 271), expose the human psychic as a fully appropriate candidate for scientific

exploration. Psychologists started to believe not only that scientific explanation can be applied but also that it is desirable. Nevertheless, the human psychic who was able to produce a universal, progressive, openness to revision, rational and logical systematic inquiry on an empirical basis through testable, falsifiable, and reproducible hypothesis is very elusive to translation from its intrinsicness I-World to The(y)-World. This can be called *The Epistemological Paradox: anything non-psychic seems knowable by human psychics but not psychics themselves*. This brings into question the real nature of scientific knowledge. Is it a real image, or is it only a manifest image like any other as-it-appear for individual consciousness? Is it an objective ontological substantial reality, free of subjective understanding, a “competence without comprehension,” knowledge, or a by-product of mind-dependent reality? “Scientific image” is one of the evolved “free-floating reasons, grounded in the pressures of natural selection that causes these behaviors and processes to become part of our repertoire” (Nagel, 2023, p. 246), “reasons that are not *our* reasons”; or “the items in the official ontology of the scientific image really exist but solid objects, colors, sunsets, rainbows, love, hate, dollars, home runs, lawyers, songs, words, and so on, do not really exist” (Dennett, 2017, p. 222). The hard problem of consciousness seems to be unavoidable epistemological incomplete because the “psycho-physical identity statements leave a significant explanatory gap, and, as a corollary, that we do not have any way of determining exactly which psycho-physical identity statement is true” (Levine, 1983, p. 354). The task of scientific knowledge of the individual consciousness implies taking the objective third-person account of the first-person account and accurately transposing (back) into the first-person account. It looks rather like a paradoxical conundrum: “The problem with the first-person point of view is that it is anchored in the manifest image, not the scientific image, and cannot avail itself of the resources of the scientific image” (Dennett, 2017, p. 352). “Even if we grant that there must be a subpersonal story, in the scientific image, that can satisfactorily explain all the behaviors and emotional responses, the decisions and verbal reports I make, it must leave *me* out of the story!” (Dennett, 2017, p. 354)

The self-reference of any social and human theory to its author is, most of the time, indirect and impersonal. Their object is not the individual person but some general social, economic, etc. phenomena, although they assume specific characteristics of individuals who act agentically. Sociologists focus on collective phenomena. They are concerned with explaining social phenomena and could easily set aside the individual person. However, there is no society without agents; any society is precisely as such because it is

made of particular individuals. The abstract sociological processes generality overlooks the methodological individualism (Weber, 1922/1968) that necessarily complements it. They can “afford” to dismiss its influence as a tolerable measurement error, pragmatically small enough. Unlike sociology, in psychology, the relation between the object and the personality of the research has primacy. It is less relevant, which is the economic mechanisms that animate people, perhaps only indirectly touches the self-image of whether *homo economicus* is Smithsonian, Keynesian, or Marxist being. However, in psychology, the image of psychological mechanisms directly affects self-image at the level of its fundamental beliefs. As you have seen above, the personal meaning of the research topic can subtly influence the researcher’s objectivity. In psychology, scientific knowledge should pass the third person of sociology of knowledge (scientific image) level to incorporate the fourth level of psycho-analysis of scientific knowledge as part of its methodology.

Let us illustrate this complex epistemological situation in psychology, where the hypotheses are strongly connected from the very beginning with the future conclusion by a bit of psycho-analysis of research behavior. In psychology, because of the intrinsic self-referential structure of inquiry, the conclusion and, with it, the judgments on subject traits are prefigured from the very beginning. It is easier to initiate sociological research starting from the hypothesis that human communities are ethnocentric than a psychological one to check that human psychology is selfish. There are many psychoanalytical mechanisms involved here. I could do this if, being socially nurtured beings, I have the conscience of good and evil, but I am also aware of my tendency to behave selfishly, and it would be a relief for me to prove that not only me but people in general are selfish. In psychology, any assumption, being self-referential by excellence, raises increased challenges. Both epistemic reflexivity, as theoretical auto-reference, and practical reflexivity of self-reflection are present in psychological research. It is hard to control your prejudices and subconscious reasons using only the standard scientific objectivity as in other sciences. At the subconscious level, I know that conclusion is also a self-description, and what is predicated can clash with my moral, religious, or existential beliefs. From psychological research, we already know that the intensity of moral experiences and responsibility are related to the expected position of the group. We feel less guilty for doing a wrong deed if we made it collectively (diffusion of responsibility). Consequently, concluding that the human species is selfish is less concerning, so *Amicus Plato, sed magis amica veritas*. In this case, “I would love to be part of a more altruistic species, but if this is not the case, it is not so

big a tragedy.” On the other hand, if I discover after research that people are good and I am selfish, this is not so easily bearable. Do I have the strength to take the risk of such a conclusion?

The double mechanisms of the development of psychology

In this paper, I want to show how Philosophy could provide a better and more comprehensive answer to the problem of the historical evolution of psychology. We start from the thesis of Buss (1978), who argues that the evolution of psychology (of personality) had a revolutionary recurrent character based on the alternation of psychological paradigms founded on two metaphysical principles: “Reality Constructs Person” and “Person Constructs Reality.” There were two major revolutions, from structuralism to behaviorism and from behaviorism to cognitivism, and two peripheral ones: the psychoanalytic (Unconsciousness Reality Constructs Person) and humanistic perspectives (Person Constructs Reality through Self-Actualization). The four revolutions brought alternatively forth the two explanatory theories based on the primacy of the object versus the subject in the construction of personality. For Buss, this situation is distinctive for human and social sciences because they are reflexive studies, the subject itself being the (direct or implicit) object of the study. At the end of his paper, he pleads for a “revolution to end all revolution” to overcome the fatality of circular development due to the linear reflexive relation between subject and object, promoting a dialectical bidimensional model. This paradigm should “emphasize the *reciprocal, interactive* relationship between the person and reality such that each may serve as both subject and object.” (Buss, 1978, p. 8) However, his arguments support the idea that psychology will never fulfill its goal because of the fundamental contamination of its structure by reflexivity.

Assigning a dialectical relationship seems to be a natural, logical solution for recurrent dynamics of psychological paradigms. However, this intriguing and interesting hypothesis has neither strong logical nor empirical support. This depiction does not substantiate. It is neither on the “revolutionary” character of paradigm shifts nor too convincing in demonstrating the metaphysical root of each paradigm. This “historical and self-conscious value-laden” approach, based on dialectical (neo)Marxist schema of historical evolution, offers no real explanation or solution for the underlying mechanism of this particular pattern of psychology’s advancement. “In adopting a dialectical paradigm in regard to the subject-object relation, psychologists can complete the revolution to end the revolution. Of course, no claim is made here that with the dialectical paradigm, the history of psychology comes to an abrupt end.” (Buss, 1979, p. 9)

There was another author who tried to deepen the explanation of his findings. Flanagan (1981) proposes three explanations for why this particular pattern is manifesting in the history of psychology. The first hypothesis is that psychologists reach a mental (emotional or cognitive) threshold after a period of constant accumulation of one type of explanation, from where its hegemony is no longer emotionally bearable and leads to an easy acceptance of the opposed model. Nevertheless, this explanation tacitly adopts one of the two views so that it falls under the incidence of vicious circularity. He noticed that this hypothesis leaves unexplained why people tend to think substantially in one mode or another. The basis of the reflexive advance of psychological understanding is based, in this case, on the self-reflexivity of psychological thinking and not on the reflexivity of the psychological object, i.e., the psychology of the people. Here, we can find the first argument for why the “recessivity principle” can be more epistemologically relevant for the advancement of human knowledge than the dialectical description. Psychologists resort to abstractions to build their explanatory theories, and the abstraction absolutizes and isolates. “It is an elementary finding that the abstraction isolates but - we notice - isolation as such does not lead to oppositions but to artificial harmonies instead, to the absolutization of an aspect to which the others are subordinated, which is completely alien to the correlative opposition, which implies generic terms, placed at the same level, unsubordinated.”(Florian, 1983, p. 45)

The second advanced hypothesis is that both are simultaneously required, but again, psychologists are cognitively unable to conceive such complex, nonlinear, nonunidirectional models. The main weakness of this explanation is the obvious fact that our very relationship with the world is bidirectional, and we should not have such difficulties in understanding this. However, the difficulty of constructing such dialectical multidirectional models is complicated because of the high abilities required for understanding subsequent logical vocabulary and metaphysics.

The third hypothesis suggests that this alternating pattern occurs because the very historical and social sense of ourselves is alternating in time. The history of psychology is formed by true psychologies of different historical periods. The people are not in a “real” way or another, but they “perceive” themselves differently, and psychology mirrors these perspectives. It means that psychology builds the human personality models starting from these conceptions and reinforces them. The sources lay in the dominant feature of people living in those times. This hypothesis is obviously true for social behavior theories that are “primarily reflections of contemporary history.” It is also at least pertinent to claim that Freudian

psychoanalysis is, at least to some extent, a historical depiction of Victorian Viennese psychics. If his analyses weren't scientifically sound, we can ask why Charcot's hysteria disappeared mysteriously in the following decades. Both the subjects make reality and humans as objects made by reality express "what we are doing or recommending doing at the historical time." "If psychological theory is just a form of social commentary with both a descriptive and prescriptive side, then the whole search for progress is wrongheaded." (Flanagan Jr., 1981, p. 384) The descriptive component of a theory could enhance its prescriptive component, or on the contrary, it could form the basis for a counter-prescription. For Flanagan, progress in psychology is only possible in Popper-Lakato's sense. Accomplishing one or another dimension with the new theories is progressive over the old ones because it explains everything that the former explained plus something else. As will become evident in the following, this explanation is also subsumed to the explanatory hypothesis presented here.

However, this simple historical depiction of the evolution of psychological paradigms leaves some key issues unanswered: Why is this the particular pattern of personality self-conceptions changing over time? Is psychology still a science if its development is marked by such indecisiveness? Is there no progress in psychology and only "psycho-graphy"? What about its appeal to outcomes from natural sciences (physics, chemistry) and life sciences (biology) research?

This descriptive pattern of the history of psychology is just an abstraction and idealization that cannot account for the actual evolution of folk and scientific psychological conceptions of human personality. The "isolation through abstraction" and stated "artificial harmonies" impede a clear view of the evolution of psychology. The details and aspects that form the substantial part of the studied phenomenon are either neglected (if they seem too different) or transformed (to fit the big picture).

For example, there is a fierce dispute in the field of history of psychology, but also among the many psychologists who rely on their professional and scientific dignity and preeminence on whether there was a real cognitive revolution or it was just an "origin myth" (Hobbs & Burman, 2009). But it could be argued that there never was a pure behaviorist conception in psychology because behaviorists never negate the existence of the inner states, only their relevance for functional analysis. Some of its key findings, such as classical and operant conditioning theories, were never *de facto* disallowed. Also, there was never a genuine conflict between competing and exclusive theoretical paradigms in the case of behaviorism and cognitivism. There were cognitive research programs during the behaviorist ages, too.

Once more, there was not a paradigm shift from an *instrumental* (theory seen only as a linguistic means for facilitating the integration and prediction of empirical laws) to a *realist* (theoretical references to presumably existent cognitive and biological states and processes) conception of scientific theories, but only a replacement of strict behaviorist description by operationalized variable with more imagined hypothetical constructs of cognitive cause. Moreover, behaviorists preserved the central theoretical elements of their theories, i.e., principles of operant or classical conditioning, despite the putative anomalies as biological limits on conditioning and doubts about the capacity of conditioning theory to accommodate linguistic performance (Greenwood, 1999). The revolution did not involve a liberalization of attitudes toward theories postulating intersubjectively unobservable internal states because behaviorists and neobehaviorists never admitted the semantic relevance of internal variables. The cognitivists, following the physicists' model, allow instantiating the structure of theoretical postulated entities to meaningful descriptions of intersubjectively unobservable phenomena by analogy and metaphorical relation with the semantics of the descriptions of the properties and mechanism of the more familiar systems. The real revolution was rather semantic, from an "intervening variable" to a "hypothetical construct" that possesses "surplus meaning" (Greenwood, 1999).

Data from some significant participants in the "cognitive revolution" and a general scholarly literature survey revealed that no substantive revolution occurred (O'Donohue et al., 2003). The swift form of the dominance of behaviorism to cognitivism does not comply with the main criteria advanced by the major theories of the scientific revolution. Behavioral theories were never falsified, and cognitive theories did not prove to be "logically stronger" to have "predictive power" or to include a "greater amount of empirical information" (in this last case, on the contrary) (Popper, 1972, p. 217). There were never shown that the behaviorist paradigm, in the face of "an empirical anomaly or set of anomalies," gave up on scientific intransigence, starting to improvise solutions and degenerating and being replaced by the *improved* problem-solver (Kuhn, 1962), being more *progressive* (Lakatos, 1970) or being exceeded by the cognitive paradigm in its ability to solve substantial problems (Laudan, 1977).

At first sight, the analysis of O'Donohue et al. (2003) seems to grant only a weaker conclusion. The shift from behaviorist methodology, which only recognized observable external behavior, to cognitive theory, which acknowledges unobservable mental entities, was the modification in majority consensus in the scientific community for growing acceptance of the

importance of mental states in scientific explanations. However, the first-person status as a legitimate object of study remains unwarranted. From this perspective, “the cognitive revolution is best characterized as a socio-rhetorical phenomenon”(O’Donohue et al., 2003; see Gross, 1990) due to: (a) the higher persuasive burden of epistemological barriers of behavioral research tradition (the causal status of beliefs, the role of free will, the explanatory and predictive status of intentionality and motives, the problem of internal causes for behavior, difficulty of deciding on the set of explanations and scientific method) (O’Donohue et al., 1998) and (b) the persuasiveness of writings of key cognitive researchers and theorists. The cognitive theory is not more accurate but has fewer epistemic barriers that are more easily overcome.

This is equal to the claim that the truths of science are just terminological upgrades and innovations according to the pervasive socio-economic environment, e.g., ghost in the machine for the industrial age or computer analogy for the digital epoch. However, this is a logically inconsistent conclusion because it falls under the incidence of a vicious circle. Unlike other sciences, it is hard to deny the obvious evolutionist advantage of psychology, which offers the opportunity “to reflect upon their objectivity, and subsequently change it in the light of previous research findings and new information”(Buss, 1978, p. 59).

Although the dialectic relationship between the two paradigms can prove partially useful, I will argue that it cannot grasp the complex progressive trend of psychology. I propose instead a model for the historical paradoxical particularity of psychology development, which seems to progress through significant sifts between these two major vicariant epistemologies, but acting at various levels and different periods both continuous and discontinuous “intercalated”(Galison, 1997). Representing this specific relationship accurately requires a more comprehensive term like Recessiveness or Recessivity.

The Recessivity

In its significance proposed by Mircea Florian (1983), the term “recessivity” (or “recessiveness”), borrowed from Biology, receives new meanings and becomes more suitable to express the complexity of human reality and the world in general. Accepting a recessive structure of the world, the possibility of identity and novelty becomes more understandable. The development of psychological theories is very accurately depicted as a process of recessive dynamics. It catches both the permanence of each paradigm and their alternate primacy. The alternative concepts, such as dialectics, miss the complexity of the mutual relationship of these two

epistemological paradigms. They are not parallel because they imply a fundamental relation of mutual and reciprocal references. They are not just *complementary* because, in this case, both receive equal stands, and there will be no rationale for changing their primacy in time. The *correlation* implies a mutual dependency in which one thing affects or depends on another, while these two principles form standalone *weltanschauungs*. Neither the recessive rapport is equal to derivation, where the first term produces the latter. The first term has its contribution to the existence of the second one. Florian argues that the dialectical relation in explaining the world's fundamental structure is unsuitable for three primary reasons. First, we could not identify a starting point for this process. As we have seen, Wundt's introspectionism, which made Buss include it in the Person-Constructs-Reality perspective, is opposed to his structuralism, which would be more related to the opposed paradigm. Secondly, we have an incessant return to the same two opposed terms, not a synthesis. Thirdly, the Hegelian dialectic, and the philosophies based on it, are based on contradictory opposition that implies that both terms exclude each other. If this is true from the perspective of the epistemological approach ("Cartesian gravity" (Dennett, 2017)), it does not grasp the particular relation between human tri-unitary dimensions, i.e., bio-(socio)-ideatic. It seems that concepts (metaphors) from other fields of human thinking, matured over thousands of years, like theology, are more appropriate to grasp the (self)image of the human person (Popoveniuc, 2016). The unity of personality is based on the correlation of opposing factors, biology of anatomy, and ideality of culture (inter) mediated by the sociality of interpersonal determinations.

On the other side, recessive dualism is based on a type of contrary opposition where one of the terms is *superordinate*, the other is *subordinate*, and one does not exclude the other as contradictory. The recessivity is nothing but complementarity, parallelism, or the principle of correlation between the two correlative terms because "the emphasis falls not on the correlation ratio but on the correlation supports." The issue discussed here highlights the idealistic nature of Hegelian dialectics. The complete negation of the thesis and its subsequent transformation into the antithesis are abstract concepts that fail to reflect the complexities of real-world phenomena. The dualism is only practical, like "prime mover" *primum movens* for thinking and theoretical systems, but the contradiction rarely dissolves in a synthesis.

The recessive relation, on the other side, is more appropriate to describe actual events, phenomena, and experiences. Recessivity is "the principle of great oppositions, antitheses, and antinomies tangled in existence, consciousness, and value. Recessivity makes tolerable expressions

of antithesis, antinomy, polarity, and duality” (Florin, 1983, p. 71). It highlights the logical *inequality*, but not the temporal one, of the two opposed terms, hence they are not equivalent, because one is dominant and the other recessive, and also it excludes correlation. The pair dominant-recessive has a different meaning than in biology because they are autonomous; the second term is not dependent on the first since the first could be conceived independently of the second. Their dependence is not a value one, in the sense that the recessive term is inferior, quite the reverse. However, this does not entail that the dominant term is derived from or produced by the first. In explaining the human manifold behavior, they complement each other in a vicariant process.

The particularity of recessive character, of primacy at a time and from different points of view, said Florin, is better expressed by the relation between feeling (will) and intelligence. “Feelings (and will) are stronger or genetically precede, and as such, they occupy the first place, yet they are blind, and therefore intelligence has headship, even if intelligence is otherwise weaker. Sentiment has precedence, but intelligence leads” (Florin, 1983, p. 73). A discussion of how the recessivity principle is applied to explaining the structure of psychic functions would be interesting in this area but would exceed the purpose of this article.

Levels of reflexivity

Davis and Klaes (2003) identify three levels of reflexivity implied in psychological knowledge. In the first case, there is the ontological *reflexivity* or self-referentiality, the *immanent reflexivity* related to the concrete situation of the subject-object superposition. Any psychological theory is also about the very theoretician, as it was already shown in the first part. The scientific object, the human psychic, is co-generic with the (collective) subject (science) that constructed that theory. The fundamental structure of psychology is *self-referential*. At the gnoseological level, we have *epistemological* (or methodological) *reflexivity*. This is the individual or *reflexivity as such*. This stage is related to individual psychologists' actual activity in their real-life work on understanding human psychics. The psychologist reaches the level of self-reflexivity if he is aware of the self-reference of his research while working on the theory, despite the illusion of objective thinking induced by its formation in a particular scientific research methodology. This is the first level of self-awareness of individualistic reflection about the nature of psychological research. The theoretician is continuously aware he/she is studying a similar self-reflective being, i.e., he/she thinks its own thinking. This is the true meaning of the reflexivity in science. However, we also have a third level of reflexivity when

the psychologist is doing research while he/she is positioning him/herself in the historical and social context of his scientific activity. This can be labeled transcendental/transcendent, meta- or self-reflexivity. It is transcendent because, from an ontological perspective, it is related to the historical structures of collective knowledge. It is also a transcendental perspective because, from a gnoseological perspective, it implies the very structures of understanding set by the collective mind. This is a more comprehensive self-reflexivity than the plain “I think how I am thinking” because the subject perceives self-understanding while being aware that he accomplishes this through the collective (scientific) knowledge: I think how am I thinking as thinking.

These three levels of reflexivity: reflexivity as self-reference, reflexivity as such, and self-reflexivity, could be parallel with the further level of human thinking. The first person is the simply thinking (“I think”), the second is you are the other similar to me (“you think”), and the third is the objective, impersonal scientific knowledge of what “is thought” collectively (scientific image in Dennett’s terms). The phenomenon of reflexive thinking is involved starting with the fourth-person perspective. I think of myself in terms of third-person scientific knowledge, i.e., using a third-person perspective on the mechanisms of the first-person perspective (Popoveniuc, 2016). This expresses pure self-reflexivity, a scientific counterpart of the religious *samyaksambuddha* (Buswell & Lopez, 2014). Further, we can only speculate on the higher level of collective thinking, like being able to think myself through and within (the other) you, who I am, or I think of you as if I were you, or to adopt the perspective of conscience of collective thinking, but these are out of our topic.

Later on, I found that a very close perspective can be revealed in Bourdieu’s works. His perspective applies to sociological research because it sees it akin to psychoanalysis. When he uncovers the intrinsic “suffering” of sociological self-referential episteme, he considers four levels of reflexive practice employed in sociological research. The first level of reflexivity is that of the scientific subjects simply self-analyzing themselves as subjects; the second “involves the scientific subject placing himself as an object related to other objects – someone who has his own interests and capital configuration”; the third level of reflexivity, the real “epistemic reflexivity” (Bourdieu & Wacquant, 1992, p. 46) focuses on how it is fixed in, and oriented toward scientific practice, “the subject is not just an object, but an object in a scientific and/or intellectual field which can be very different from the fields in which the research objects find themselves.” Finally, a fourth level is the “*reflexivity that sees the object as a subject who also has a point of view regarding the scientific subject*” (Ribeiro & Miraldi, 2022).

Humans as a social species evolved within the unique settings of collaboration and epistemic engineering. Consequently, many human abilities have been outsourced wherever possible, and much of our intelligence lies in the people and things around us. “By hypothesis, epistemic engineering is a basic evolutionary principle. It ensures that living systems not only identify the differences that make differences but also that distributed control enables them to *construct* epistemic change” (Cowley & Gahrn-Andersen, 2023). Both collaboration and epistemic engineering were almost always enhanced and accomplished through the use of technology, whether it be physical (knives, telescopes), symbolic (alphabets, vocabulary), or digital (programming environments). Consequently, human knowledge is distributed (Clark & Chalmers, 1998; Hutchins, 2001) and immersed in a world beyond individual understanding. Because I am part of the scientific/cultural “hive thinking,” I think of myself by the hive mind, the collective mind (culture), when I suppose I am self-reflexive. “Our intelligence resides not in individual brains but in the collective mind”(Sloman & Fernbach, 2017, p. 5). Such competency (even without comprehension!) seems perfectly defensible in the case of artificial intelligence programs that work in networks. An artificial (general) intelligence will have another epistemic advantage. Because its “transcendental epistemic structure” is based on and incorporates the scientific image in its very way of functioning, it is the ideal candidate for the fourth-person perspective (Popoveniuc, 2016). This would not be the longed-for elevation of trans-human understanding but rather a descent into an un-human abysmal comprehension.

Coming back to the epistemological dimension, the immanent reflexivity in social sciences will always cause alteration of the theoretical paradigm, and not because of some methodological or epistemological curse. Psychological theories will change because their object of study is dynamic and evolving. The human person is not a static reality, like the physical, biological, or even social world fixed from the beginning, evolved after a particular law of living nature, or has deterministic pathways that slowly change in time. The reflexivity stance itself is part of the deterministic systems of law that govern human development. The fundamental error of the social sciences is “when the scholars conducting the research fail to constitute their object as including a ‘subject’- ‘object’ relation different from a relation of scientific knowledge, they project this scientific model into their relation and proceed as if the relation of practical knowledge were the same as the relation of scholarly knowledge” (Bourdieu, 2020, p. 33). Any knowledge about human psychology that becomes part of its cultural environment will affect its

behavior. It shapes, in a very concrete way, the studied object (reflexive subjects), which will be changed, more or less, by integrating the new information brought about by that theory. „Psychology involves objectifications in linguistic form of the way the subjects are behaving [thinking] (and/or constructing their behavior [thinking]) in any historical epoch” (Flanagan Jr., 1981, p. 383). This objectification could entrench the very *Weltanschauung* it depicts. This is the recurrent progress of collective development. Once accepted and integrated into folk psychology and mass education, any theory about reflective subjects will change how people perceive themselves. This process is also part of human’s evolutionary path. “Hominins evolved new inheritance mechanisms, not just new phenotypes. Late hominins resembled their parents in part because genes travel across the generations; in part because the preceding generation engineers the developmental environment of the next generation; and in part because information, mediated by social learning, flows from one generation to the next. Multiple inheritance mechanisms transformed human evolutionary regimes” (Sterelny, 2012, p. 12). It is not so much the case of the self-fulfilling prophecy but a genuine phenomenon of reflexive development of the human person through the collective (knowledge) evolution. People did not explain themselves in terms of Super-Ego, unconscious, and libido prior to the creation and widespread of psychoanalytic theories, just like they used to explain pathological manifestation by demonic possession before the crystallization of modern psychiatry.

The explanatory model

Human beings are “tri-unitary” beings: bio-physical, socio-cultural, ideo-informational. Its psychological life is the result of evolution. The scientific understanding must take into account all three dimensions. The history of psychology reveals the primacy of Person Constructs Reality, and Reality Constructs a Person in all various paradigms (Popoveniuc, 2017).

At the same time, the term “Reality” refers to three different concepts. Throughout the entire history of psychology, the Subject was always conceived as the human spirit (psychic), but the “Object” designed material nature, social reality, or cultural world. So, the apparent unique duality of recursive terms turned into three-sided semantics. Human personality is not the result of abstract thinking but a bio-socio-cultural unity. There is no single duality but multiple dualities. Humans accommodate “the existence of several recessive dualisms, between which none is dominant and the other recessive” (Florian, 1983, p. 55). There are three dualities conflated under the label of Object or other-than-psychic-

itself. Each duality is in a hierarchical recessive duality rapport (the matter, the social, and the *ideatic*).

The relations between the three factors in the personality structure are successive recessive because they are not in a relation of coordination but subordination in the most objective sense without excluding the reversibility under particular circumstances. “The recessive duality does not imply terms of equal (*isostenic*) power and equal value (*isotimic*), but one of the terms prevails over the other.” At the same time, “the recessive factor, although subordinated, has a higher existential significance, for example, matter dominates the spirit, which is recessive, but the spirit has a major significance, and so does the other dualisms.” (Florian, 1983, p. 55).

Hence, the historical progress in the psychology of personality is better described as having a Recessive dynamic, where the tokens “person” and “reality” become successively dominant and recessive: Person Constructs Reality, *and* Reality Constructs Person. This dynamic is multiple because reality is manifested manifold bio-physical, social, and cultural.

The *functionalist property-dualism*, the leading perspective in the contemporary philosophy of mind (Botterill & Carruthers, 1999), can be incorporated into this model even if it avoids substance-dualism by assuming just the irreducibility of physical and mental proprieties and depicts mental states only in terms of their functions, “the causal relations to sensory stimulations, behavioral outputs, and other mental states.” (Block, 1980, p. 172)

In Philosophy, this situation of the antinomic structure of metaphysical conceptions is not seen as abnormal but as a problem that must have an explanation. In science, dialectical evolution is seen as an epistemological parricide. The philosophical systems stem from one another because they rank one against another. In other words, because of a system's growth, at the same time, either its antithesis (another system with an opposed theme and issue) or *antistasis* (a system that represents another phase within the same issue: against materialism raising idealism, unfolding in subjective, objective and absolute idealism).

In psychology, the development is similar. From structuralism came out, by *antithesis*, behaviorism, and from the later cognitivism (allegedly) or another phase of behaviorism, an *antistasis* (from radical behaviorism to cognitive behaviorism). “This dual pluralism, polymerization of the systems reveals that the thesis and antithesis are not *isostenic*; they do not have equal effectiveness, so there is no objective balance of the possible truths they comprise. It is in the nature of any system to be incomplete, open, unsaturated just because it is a *determined* system, with a particular axiomatic

starting point, with a certain level of the problems” (Florian, 1983, p. 63). However, this seemingly horizontal epistemic swing is also progressive, deepening and expanding psychological knowledge. Any new recursive step is built on and incorporates the result of the former recursive phase.

The imperative of a “(self-)reflexive turn” in Psychology

The idea of contemporary cognitive science is to provide a pure “scientific image” of human psychology devoid of any subjective “manifested image,” in Dennett terms, or a “transcendental depiction” in Kantian terms, who advocates “a sort of transcendental property dualism according to which the human mind has properties “in-itself” that is irreducible to its empirical properties” (Frierson, 2013, p. 169). “When referring to the duality (*zwiefache Art*) of human beings, Kant says that the human being is not only a phenomenon in the world of sensation (*Phänomen in der Sinnwelt*) but also an intelligence in the world of understanding (*Intelligenz in der Verstandeswelt*)” (Xie, 2010, p. 592). And this is the path modern psychology takes firmly: constructing a purely scientific image of the Subject.

The scientific image of psychology is the collective creation of evolved creatures on the last scientific level of the Tower of Generate-and-Test (Dennett, 1996). Aside from its manifest image in the brains of individual organisms, the scientific image of the human psychic set a pragmatic, functionalist understanding of psychology for an intellect in general, not for that embodied one. Human cognition is no longer conceptualized in terms of sensation processing (representations or perceptions) or reason but as organism-environment coupling, learning, computation, sense-making, and so on. In its efforts to be like archetypal physics, psychology became the last brick on the path to making the world understandable for “a” general intelligence, the allegedly next step in the evolution of life in the entire universe (Kurzweil, 2006).

The decisive incentive for the advancement of the cognitive paradigm was provided by developments in cybernetics, artificial intelligence (IA), neuroscience, and computer science (Miller, 2003). In their turn, cognitive science, analytic philosophy, and linguistics became the primary resources for developing IA. In their present form, the cognitive sciences are heavily based on computation, statistics, and a functionalist perspective, the necessary ingredients for preparing the understanding of human psychics in terms of general (artificial) intelligence. This transformation of the psychological paradigm, which most researchers seem unaware of, is now in a reinforcing loop. During its entire evolutionary history, “human cognitive

competence often depends on epistemic engineering: on organizing our physical environment in ways that enhance our information-processing capacities” (Sterelny, 2012, p. xii). However, the comprehensive integration of advanced (AI) computing technology at the base of psychology’s methodology altered the epistemic image of the human psychic itself. The optimization of psychological knowledge relies now on “epistemic prompt engineering”: structuring the psychological paradigm that can be interpreted and understood by AI models. AIs are already more competent to work with these outcomes for controlling, predicting, and manipulating humans even without comprehending them. The pathway to the prophesized intelligent evolution toward trans-(non)-human general intelligence (Bostrom, 2016; Dennett, 1996; Kurzweil, 2012) is secured by the crowds of researchers who are unreflexively immersed in developing and disseminating this kind of memes of the human psychic scientific image.

Psychology, as the manifestation of the collective (intentional) cognition of the human species about itself, has the vital role of elevating the human consciousness to the level of planetary oneness. This may sound like a bombastic New Age claim, but it is only reasonable and realistic. Scientific knowledge is the most valuable and sustainable type of collective cognition. It relies on verifiable and testable criteria, satisfactory for any reasonable person, regardless of his/her cultural, religious, or moral values. Making the continuity of human comprehension visible with its evolutionary history and revealing the common mechanisms of various cultural manifestations can have the gift of taming intergroup intolerance, resentment, and miscommunication. This can be rendered possible by inserting scientific narratives within the individual’s self-comprehension through education. The survival of the human species depends on this. The unprecedented power of destruction, the dark side of exponential technological progress, cannot be mastered by an epistemologically and culturally divided species. Without a conscience of common humanity, a morally, religiously, and politically (nationally or ideologically) divided humanity is doomed to self-destruction. The inefficiency of the judicial system alone for accomplishing this task is documented by the worldwide high rates of failure both at the national and, particularly, international level. Without moral sensitivity, motivation, and character (Rest et al., 1999), the constitutional and universal human rights principles are just empty words, and moral judgment only rationalizing motivated thinking. The moral (post-conventional) principles such as equal human rights, justice for all, non-violence, social contract, and respect for human dignity inscribed in every state constitution, any international treaties, and public speech miraculously vanish when

confronted with religious, political, or national conflicts. The conventional level (Kohlberg, 1981) or maintaining norms schema (Rest, 1986) of collective moral development (the rule of law) is insufficient for mitigating the existential risks brought by technological progress (Bostrom & Ćirkovic, 2008). Without a moral psychology of ethics, a scientific-based Ethics, to provide a common ground based on evidence, objectivity, critical thinking, and transparency, all other nonmoral foundational systems, religions, ideologies, justice to fundamentalism, extremisms, or legalism.

Science, in general, must give up its fake but convenient, ethical neutrality mask, a pure myth (Rose & Rose, 1971). Knowledge is always oriented to doing. Its objectivity transformed science into a wise authority to which people come when all their other traditional advisers (religion, traditions, habits) have abandoned them. There has never been science for the sake of science, but for doing something, but doing what? Without an informed moral judgment, the answer to the sheer ethical neutrality is: “to do what can be done!” “In this way, the means of science come to be confused with its ends, the progress of research becomes an end in itself, and we move from the imperative to seek the power to do what we know is good to the notion that whatever we have the power to do is good” (Levin, 2006). In the age of blind AI, with immense processing power and so much destructive power, it equals to leave the future of humanity to chance.

In psychology, ethical neutrality becomes irresponsibility. Unlike other sciences, the scientific image in psychology is intrinsically self-reflexive. So, instead of struggling to isolate and eliminate human subjectivity from its fundamental methodology, it should embrace it. At least in moral psychology, the epistemic ideal of a purely objective description of ethical behavior should be abandoned because it is counterproductive and dangerous. It is similar to the GenAI process of consecrating the cultural junk that floods the World Wide Web as actual knowledge. Moral psychology must assume its inescapable condition of being descriptive and prescriptive altogether. The research on the evolutionary, neurological, social, and cognitive mechanisms of moral behaviors inevitably alters the moral image. The moral image is, and must remain, complementary to the scientific image. Scientific creatures cannot exist without ethical relations with human subjects. Ethics is an intrinsic part of the scientific methodology when we deal with scientific creatures. All other types of creatures with higher information processing ability (like a forecasted AGI) will be only *informavore* (George Miller) at most. Information is not knowledge; hence, there will be no scientific creature. Hence, the hope in the wisdom of evolved AGI for solving human problems is (dis)utopian.

Reflexivity is at the core of moral psychology, and the general attitude must shift from considering it as an inevitable weakness to promote it as the essential and most valuable tool. The moral psychology scientific image should recessively employ naturalistic and anti-naturalistic views on human morality, between descriptive and prescriptive, between is and ought.

The scientific image is the single one that can provide the enlightening epistemic unity required for a highly technologically advanced species. But only as long as it remains a human scientific image. This kind of scientific image should replace, as both value and devotion, the religious and ideologically hard-praised collectively constructed reality. Reflexivity, as the fundamental principle of psychology's scientific image, far from being a hindrance, consecrates the science of psychology as the expression of human consciousness at the higher level of collective cognition and as the utmost proactive field of scientific knowledge in the evolution of the human species. While artificial intelligence holds immense potential to accelerate human evolution, the process will cease to be (truly) human if scientific inquiry is entirely surrendered to its dominion of technological tools.

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