Fact, value, meaning, pragmatism

Abstract: considering the debate in the modern and contemporary contexts of philosophy, I explore the pragmatic response to fact-value dualism. In this sense, considering that pragmatism regards mind and world as parts of an experiential continuum and humans as social beings, I draw attention to the “requiredness” of meaning and value in practices of living. Tracing a parallel between William James and Wolfgang Köhler regarding the notion of “interest”, as a form of requiredness, the central idea that I work out in this paper is that “interest” makes difference in some contexts of experience and then it leaves space for meaning and value in multiple levels of life. In terms of James’s pragmatism, as an alternative to the traditional dualities (fact-value, theory-practice, knowledge-reality, and so on), this pluralistic view supposes that each form of interest stands for condition and genesis of meaning and value in human practices.

Keywords: Fact. Meaning. Pragmatism. Value. William James.

It absolutely forbids us to be forward in pronouncing on the meaninglessness of forms of existence other than our own; and it commands us to tolerate, respect, and indulge those whom we see harmlessly interested and happy in their own ways, however unintelligible these may be to us. Hands off; neither the whole of truth or the whole of good is revealed to any single observer, although each observer gains a partial superiority of insight from the peculiar position in which he stands. Even prisons and sick-room have their special revelations (William James, On a certain blindness in humans beings).
1 Introduction

As the title suggests, my objective in this paper is to explore how fact, value and meaning are organically shaped according to a pragmatic perspective and according to the pragmatism of William James. To do this, I have situated my objective in the context of contemporary epistemology around fact-value distinction. As a general reference for this context, I review the collection Facts and Values: The Ethics and Metaphysics of Normativity (MARCHETTI; MARCHETTI, 2017) in which the organizers assume a pragmatic point of view. Since this is an extensive and diffused collection among numerous authors, a more detailed exploration could prove somewhat unproductive. To develop this paper, I will focus on the introductory study by the organizers themselves. Additionally, I examine the chapter by Hilary Putnam which offers a review of the imbrication of fact, value and meaning from a pragmatic perspective.

In Facts and Values: The Ethics and Metaphysics of Normativity (2017), in memory of Hilary Putnam (1926–2016), Giancarlo Marchetti and Sarin Marchetti organize a collection of essays gravitating around the fact-value dichotomy in both modern and contemporary contexts of philosophy which means: “the crystallization of an unbridgeable opposition between the descriptive and the evaluative […] casts doubts upon the reality of values themselves” (MARCHETTI; MARCHETTI, 2017, p. xi). In ontological terms, the fact-value distinction traces a gulf between what is (“facts”) and what ought to be (“values”). For David Hume, for instance, the distinction expresses the impossibility of deriving the evaluative sense of “ought to be” from the description of “is”. In G. E. Moore’s Principia Ethica (1993), additionally, the fact-value distinction raises the question: to the extent that “good means pleasurable”, is it reasonable to state that “is everything pleasurable good?”. By updating the debate on the fact-value distinction, Marchetti and Marchetti’s collection of essays explores alternatives that get over this form of dualism. In this sense, interestingly, they question the distinction fact-value as being two separate epistemic domains of statements: while factual statements are empirically verifiable or falsifiable through neutral and intersubjective methods in explanations, scientific prevision and objectivity, value statements are empirically unverifiable and objectively unjustifiable, seemingly being relegated to what is simply subjective, relative, emotional, and contingent (MARCHETTI; MARCHETTI, 2017, p. 3). Arriving from pragmatism in convergence with analytic philosophy and critical theory, Marchetti and Marchetti recognize that the collection is inspired by Hilary Putnam (and Ruth Anna Putnam) who revitalizes the philosophical interest in the alleged distinction fact-value. In his seminal essay which opens the collection, exemplarily, Hilary Putnam (2017, p. 27) underlines, as the most important idea of (Deweyan) pragmatism, “the rejection of the claim that there is an absolute dichotomy between descriptions of facts and value judgments”. By doing this, no doubt, Putnam stresses the topicality of pragmatism and the criticism of the distinction fact-value. In the first part of this paper, I review Marchetti and Marchetti’s collection of essays regarding fact-value dualism in relation with historical and philosophical contexts.

Rooted in a form of naturalism according to which mind and world are parts of an experiential continuum, the so-called classical pragmatism of Charles S. Peirce, John Dewey and William James breaks away from the traditional dualities such as theory-practice, knowledge-reality, and fact-value. In doing so, furthermore, pragmatism sees humans also as social beings. Drawing attention to the value and meaning of our practices of living pragmatism incorporates an ethical dimension. In terms of ethics, pragmatism is naturalistic, pluralistic, developmental, and experiential: individual practices are gradually distinguished and contextually situated as the ultimate criteria of decision-making for meaning and value to be embedded in human life.

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1 The first version of this paper was presented at the 20th International Meeting on Pragmatism, December 10, 2021, Pontifical Catholic University of São Paulo. I thank the reviewer(s) for their valuable comments, which have made this article richer.

2 By emphasizing the naturalistic sense of pragmatism, Mark Johnson (2018, p. 34) makes explicit “the view that what we commonly call ‘mental’ phenomena, as well as all cultural phenomena, are part of nature.”
By extending Charles S. Peirce’s principle of pragmatism expressed in *How to make our ideas clear* (PEIRCE, 1966, p. 123), in *What Pragmatism means* (JAMES, 2000, p. 25) William James considers its psychological effects on everyday life beyond its role of providing logical constraints in our understanding of concepts. Despite the divergences in the way Peirce and James understood the principle of pragmatism, both seem to agree that the notion of meaning itself is not dependent on the requirement of representing the world (in terms of propositional content) and that meaning consists rather in a process based on practical effects that guide our thinking.3 Grounded on practical effects in opposition to a representational way of thinking, the principle of pragmatism (according to Peirce and James) indicates a path forward for dissolving fact-value dualism – as the separation of two epistemic domains – since “practical effects” refer to a matter of what may happen alternatively to what is.

In the second part of the paper, I examine James’s pragmatism regarding the notions of value and meaning. Even while discrediting traditional dualisms, there remains the issue of in which sense value and meaning take place in a world of facts. As an anticipation of the pragmatic method, James faced this issue in *The Moral Philosopher and The Moral Life* (2010) and later in *The Place of Affectional Facts in a World of Pure Experience* (1977). For James, no single point of view can unequivocally determine ethical values and so the requiredness of ethics must incorporate a form of pluralism. James, in *The Place of Affectional Facts in a World of Pure Experience*, argues that, in our experiences, things may possess different qualities: the same thing may manifest physical properties when taken in one context and the properties of an affective value when taken in other ones. In a world of sentient beings, however, “interests” make a difference in some parts of experience, and create space for novelty, values and meaning. In such a world, given that interest is a form of requiredness, things are felt (or not felt).

In the second part of the paper, I address the works of James that concern pragmatism with respect to the notions of meaning and value. In this sense, the central idea that I work out in this paper is that the condition for meaning and value is certain contexts of experience in which interest makes a difference: no difference in experience, no meaning and value.

The object of the third part of the paper is the notion of “interest” as developed by Wolfgang Köhler in *The Place of Value in a World of Facts* (1939). Presented at the *William James Lectures* in 1934-1935, Köhler, although indirectly, places the root of his lectures in James’s *The Place of Affectional Facts in a World of Pure Experience* (1977) discrediting the dualism fact-value and therefore incorporating a pragmatic way of thinking. In this sense, critically, Köhler underlines that the world of natural sciences is a “world of nothing but” – the famous expression coined by Julius Huxley for depicting the ideal of objectivity according to which value and meaning in human experience are senseless in the world of science. While science seems to be stuck on the world of nothing but without the understanding of “requiredness”, Köhler argues that human activities are clearly invested by “requiredness” (as a sort of interest) insofar as some things “ought to be” (and others not).

My central point in this paper, tracing a parallel between James and Köhler regarding the requiredness of value and meaning in human life, is the assertion that they are set on a pluralistic bedrock since they are situated in multiple levels of experience. Instead of feeding a sort of dualism, I advance the view that fact, value, and meaning are interpenetrating and interdependent in human life (including scientific practice, as part of the human activities). In epistemological terms, as alternative to dualism, this view supposes a “pluralistic naturalism where each form of explanation is appropriate for a particular emergent level of functional organization within a creature in ongoing interaction with its environments” (JOHNSON, 2018, p. 34-35). According to this pluralistic view that is firmly incorporated by James, each form of interest is an appropriate explanation (for a particular level of an individual’s interaction with specific environments) and condition for the genesis of meaning and value in human practices of living.

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3 The chief difference between Peirce’s pragmatism and James’s pragmatism arises from the fact that Peirce’s point of view is logical, while James’s is psychological. Whereas Peirce sought the meaning of a proposition in its logical and experimentally testable consequences, James looked for more immediately felt sensations or personal reactions” (WIENER, 1966, p. 181).
Considering this pluralistic view, more than a methodology for the natural sciences, critical and interpretative methods can also provide a full explanation for a comprehensive understanding of meaning and value beyond the dualism of descriptive and evaluative statements. To demonstrate this, I have added an appendix exploring Ernest Mayr’s concept of “historical narrative” as a reconstruction of evolutionary scenarios in biology. In convergence with Marchetti and Marchetti’s criticism of the so-called fact and value dualism (2017), given that Mayr’s historical narratives stand for provisional statements, they may function as interpretation in the direction of a new picture of the descriptive and evaluative understanding of evolutionary facts. Using Marchetti and Marchetti’s terms in parallel with a pragmatic perspective, Mayr’s concept of historical narratives breaks down the conception of fact and value as being two separate epistemic domains.

2 The matrix of fact-value dualism

In a collection of essays entitled Facts and Values: The Ethics and Metaphysics of Normativity (2017), Giancarlo Marchetti and Sarin Marchetti present a review of philosophical debates concerning the so-called fact and value dualism while also seeking to map alternatives. Gravitating around Hilary Putnam’s essay, which can be read as updating pragmatism, Giancarlo Marchetti and Sarin Marchetti question value dualism as it has been promoted in philosophical and scientific discourses as well as the distinction between descriptive and evaluative statements.

In their reviewing of the fact-dualism that summarizes each chapter’s objective, Marchetti and Marchetti intent at demonstrating that the opposition of facts and values corresponding to objective and subjective are false dichotomies. Particularly, in Giancarlo Marchetti and Sarin Marchetti’s Facts and Values – The Ethics and Metaphysics of Normativity, one finds a criticism of the assumption that facts and values belong to different (and even indeed opposite) epistemic fields. In this sense, as they point out (MARCHETTI; MARCHETTI, 2017, p. xi), while “fact statements deal exclusively with objective justifications, value statements are relegated to the sphere of subjective and contingent impressions, outside the scope of rationality altogether”.

Within the context of Philosophy, the fact-value issue traces back to David Hume’s A Treatise of Human Nature and it has since become known as “Hume’s Law” (MARCHETTI; MARCHETTI, 2017, p. 3). This thesis, which asserts the principle of non-derivability of values from facts has long been the subject of intense debate. In their introduction to Facts and Values – The Ethics and Metaphysics of Normativity, Giancarlo Marchetti and Sarin Marchetti enumerate the crucial points of this debate. According to “Hume’s Law”, an “ought” cannot be derived from an “is”:

I am surpriz’d to find, that instead of the usual copulations of propositions, is, and is not, I meet with no proposition that is not connected with an ought, or an ought not. This change is imperceptible; but is, however, of the last consequence. (HUME, 1960, III, I, 1).

For Hume, it is fallacious to derive evaluative conclusions from descriptive premises: propositions describing what is the case should not be reducible to propositions prescribing what ought to be thought or done: while what is relates to descriptive statements, what ought to be corresponds to evaluative statements. For Giancarlo Marchetti and Sarin Marchetti, historically and philosophically, Hume’s principle of non-derivability has nurtured the understanding that facts and values belong to two different epistemic domains: while one can attribute truth-conditions to descriptive statements in terms of “what is” or “what is not”, in respect to evaluative statements of “ought to be” or “ought not to be”, we cannot; – and if we do, we incur in the “naturalistic fallacy” as is the case when attempting to analyze normative concepts in natural terms.
3 The philosophical anatomy of fact-value dualism

According to Giancarlo Marchetti and Sarin Marchetti’s argumentation (2017, p. 1-2), while presented in many different philosophical clothes, fact-value dualism may be regarded as the most expressive heritage of modernity in dismissing human experience from scientific investigation. For advocates of this dualism, speaking in general terms, facts and values correspond to two separate epistemic fields:

factual statements, as empirically verifiable or falsifiable by means of neutral and intersubjective methods, refer to “true” gnoseological problems and trade in explanations, scientific prevision, and objectivity [...] Value statements, being empirically unverifiable and objectively unjustifiable, seem to be relegated to what is simply subjective, relative, emotional, and contingent. (MARCHETTI; MARCHETTI, 2017, p. 3).

According to a tradition descending from Hume, fact-value dualism results from considering objectivity as belonging to the sphere of natural science: that is, dealing with facts only, while knowledge is supposed to be grounded on neutral basis and therefore value-free, as values are unstable and improper to be bearers of truth. In the case of moral statements, insofar as they cannot be analytically and empirically expressed by verifiable or falsifiable sentences, we declare them to be without sense. This is not only a matter of linguistic representation, but also of the place human experience plays in our knowledge of the world. In the sense that value and meaning populate the human experience, moral statements are relegated to express what is subjective, relative, emotional, and contingent: in other words, human experience is has no place in the objective ideal of knowledge.

In the explanatory strategies of Neo-Darwinist materialism, one finds this portrait of knowledge. In the case of the very understanding of “mind”, for instance, it is devoid of ingredients such as intention, meaning, value, *qualia*, reason, belief, and so on: that is to say, “mind” is naught but the result of the development of random processes between ontogenesis and environmental contingencies. Almost twenty years ago, when the materialist philosopher J. J. C. Smart published *Our place in the universe* (1989), one could have questioned: what does “our” mean? Or “we”? “We” cannot only mean ourselves, human beings, since mental life is not an exclusively human property. Even accepting “we” to refer exclusively to human beings, one hardly finds room for the understanding that some things ought to be in such and such way in the world within the framework of Neo-Darwinist materialism. In such a worldview, supposedly, the physical sciences would be capable of providing a theory of everything regardless of the existence of consciousness, intentionality, meaning, purpose, thought and value (NAGEL, 2012, p. 4; 12). In the case of value, particularly, it is not an issue concerned with natural sciences nor can it fit within a materialistic worldview.

According to Smart’s view, which is largely related to Schrödinger’s ontological reductionism in *What is life?*, “our” does not seem to mean “ourselves” as the psychological processes may well be reduced to the sequence of physical behaviors and accidents. For Smart, the understanding of psychological processes does not suppose schemes of intention, meaning, values, *qualia*, reasons, beliefs, etc., or a

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4 “So if ‘we’ enact our world, perhaps some qualification may be needed to specify the ‘we’ being referred to. Both animals and humans may enact their worlds in order to perceive and engage with them” (PICKERING, 2005, p. 278).

5 In *Purpose and Desire: a new model for understanding life* (TURNER, 2017), by addressing the point of failure in modern Darwinism, the biologist and physiologist J. Scott Turner, confronts the issue of what makes something “alive”. In his view, intentionality, for instance, should be taken to be something “real” and be part of scientific inquiries. No being a mere appearance, accordingly, the concept of intentionality might stand for the distinctive attribute of life in order to make biology equally a distinct science. For Turner, indeed, “agency” (as intentional action) corresponds to life’s distinctive attribute in the sense that living things become something. In his understanding, to the extent that the modern Darwinism lacks strategies for explaining intentionality as something real in organic life, it fails in explaining the very phenomenon of life.

6 “There is a tendency to discard such a notion [value] from science. Why else should some followers of Darwin have been so eager to explain the logical side of thinking and the ethical side of human life on the basis of mere facts?” (KOHLER, 1939, p. 36).
world of sentient beings: “what we consciously feel is a mystery unless we are able to identify what we feel with brain processes [...] I must remind the reader that my physicalism is ontological and not translational” (SMART, 1991, p. 152; 161, my translation).

Smart is perfectly aware that psychological statements cannot be translated into physical statements. In Philosophy and Scientific Realism (1963), incidentally, Smart recognizes the legitimacy of Hume’s thesis concerning the impossibility of deducing “ought” from “is”, e.g., “no moral rules can be deduced purely from scientific considerations” (SMART, 1963, p. 153; 155). Unfortunately, echoing the so-called “epistemological gaps”, “discontinuities” or “bifurcations” between mind and brain or mind and world, Smart’s materialism displaces the very sense of “ourselves” from the universe insofar as values and meaning within human experience have no place in the ideal of objective knowledge.

In Alfred J. Ayer’s Language, Truth and Logic, Chapter 6, Critique of Ethics and Theology (1952), the conception that values and meaning have no place in the ideal of objective knowledge finds an exemplary instantiation. For Ayer, while logical and factual propositions are meaningful, value and normative judgments belong to neither and so they cannot be treated as objects of knowledge or of scientific investigation: “In saying that a certain type of action is right or wrong, I am not making any factual statement […] I am merely expressing certain moral judgement” (AYER, 1952, p. 110); “[…] the symbol ‘wrong’ occurs in sentences which simply express ethical feeling about a certain type of action […] without making any statement of fact […] the function of the relevant ethical word is purely ‘emotive’” (AYER, 1952, p. 111); and:

[…] it is impossible to find a criterion for determining the validity of ethical judgements [and] they have no objective validity whatsoever […] They are pure expressions of feeling and as such do not come under the category of truth and falsehood. They are unverifiable for the same reason as a cry of pain or a word of command is unverifiable. (AYER, 1952, p. 112).

For Ayer, nevertheless, as ethical judgment corresponds to a branch of psychology, it may be a form of knowledge: that is to say, the task of psychology consists in accounting for “different feelings that the different ethical terms are used to express” (AYER, 1952, p. 112). In John L. Austin’s Performatives (1961), however, the understanding that in some types of statements such a word of command is unverifiable opposes two philosophical trends: on one hand, the “verification” movement; and on the other, the “use of language” movement (AUSTIN, 1961, p. 221).

From a philosophical perspective, the “verification movement” (of the conditional contents of statements being true or false) of logical positivism gives way to the “language uses movement” (which is also known as the “ordinary language philosophy”). In the context of the use-movement, the emphasis is on the different uses of language and not on the conditional structure of the statements. In the process of linguistic communication, for instance, the meaning of a word is not produced under the category of truth and falsehood, but rather consists of practices situated contextually such as a word of command or a promise. For Austin (1961, p. 129), words are our “tools” of meaning and, by the use of words, we mean and do things in the world. Here Austin anticipates the performative hypothesis that ‘saying is doing’ of his How to do things with words (1962) which dismisses the picture of language as description of facts according to the category of truth and falsehood.

In line with this way of thinking, Paolo Di Lucia and Edoardo Fittipaldi (2021) organize a few contributions in Revisiting Searle on Deriving “Ought” from “Is” that, from different perspectives, comment on John Searle’s chapter, How to Derive “Ought” from “Is” (2021). For Searle, the distinction between fact and value was reframed and converted into a distinction between statements of fact and statements of value – and that is why language must be assumed seriously in this motion.

7 The reference to Ayer here is only intended to illustrate a more orthodox way of sustaining fact-value distinction.
For Searle, the matter was not to derive values from facts, but rather to derive statements of value from statements of institutional facts understood as systems of constitutive rules:

I have created an epistemically objective reason for doing something. Now the question arises, what is the status of these desire-independent reasons? [...] But to put it very crudely, the thesis that I want to advance is not only that all ethics is about desire-independent reasons for action, but that all desire-independent reasons for action are self-created. Can it be possible that there can be a discipline that is epistemically objective, but at the same time normative? And I would say, to a certain extent, yes there can be. Why? Because it can be epistemically objective that there are norms, norms of that sort where you create and recognize the validity and then act on desire-independent reasons for actions. (SEARLE, 2021, p.15).

According to Searle, whether one considers the derivation of statements of value from statements of institutional facts, it does not follow to derive values from facts. For Searle, of course, this move is not a rehabilitation of the naturalistic fallacy but indicates an appeal to the use of language in creating institutional facts.

In the face of this linguistic turn in relation with fact-value dualism, we must not forget G. E. Moore’s seminal *Principia Ethica* (1993) which directly addresses the naturalistic fallacy. For Moore, the word “good” should not take to be as a description referring to a natural property of the world. This reframing of ethical questions, such as “what is good?”, converts them into a problem of language in the sense of discerning the meaning of “good” or the way in which “good” is meaningfully used. From the standpoint of linguistic turn, ethical questions become linguistic ones.

The use of word in certain ways does not translate to a description of facts. As a critique of the referential theory of meaning, the linguistic turn foregrounds a philosophical strategy in favor of a use-theory. In this sense, exemplarily, Austin coins the term “descriptive fallacy” as the view that phrases such as “I know” or “I promise” are descriptions. In the appropriate circumstances, these phases are not describing an action, but rather they are doing it as “I do” (AUSTIN, 1961, p. 71). In Giancarlo Marchetti and Sarin Marchetti’s *Facts and Values: The Ethics and Metaphysics of Normativity* (2017), much of strategy employed in the linguistic turn updates pragmatism’s frontal assault on fact-value dualism in rejecting the claim that there is an absolute gulf between descriptions of facts and value judgments.

4 The entanglement of facts and values in pragmatism: a prelude to James’s pragmatism on value and meaning

By using the expression “the entanglement of facts and values”, Giancarlo Marchetti and Sarin Marchetti (2017) draw attention to the recognition that this is one of the cornerstones of Peirce, James, and Dewey’s pragmatism in terms of anti-representationalism, holism and fallibilism. The idea is that “the normativity of our thoughts and talks literally emerge from our socially-governed engagement with the world” (MARCHETTI; MARCHETTI, 2017, p. 13). In this sense, breaking away from the traditional dualities such as theory-practice, knowledge-reality and fact-value, pragmatism regards mind and world as being a form of experiential continuum and in doing so, regards humans as social beings: that is, the only way of separating the descriptive from the evaluative is to pay attention to the ways that we think and talk.

In line with the linguistic turn’s critique of referentialism, pragmatically, thoughts and speech merge experience and facts into our activities that make sense of the world (including science itself understood as one among human activities). In appropriate circumstances, for instance, “I know” or “I promise”
are expressions of our doing something instead of being descriptions or references to facts (and, once again, including science itself understood as one of many human practices). To the extent that “I know” or “I promise” merges experience and facts into human activities, they are loaded with meaning and value. From this point of view, the use of “I know” or “I promise” foregrounds the idea that the only way of separating the descriptive from the evaluative (in terms of theory-practice, knowledge-reality, and fact-value) is a matter of thinking and speaking in our engagement with the world. As expressions of doing things, “I know” or “I promise” instance a pragmatic sense of merging fact and value (in terms of anti-representationalism, holism and fallibilism) in contrast with the traditional view of propositional attitudes (as in analytical philosophy of mind and language). 8

Honored by Giancarlo Marchetti and Sarin Marchetti in Facts and Values: The Ethics and Metaphysics of Normativity (2017), Hilary Putnam revives so-called classical pragmatism to advance the critical view that an absolute dichotomy between descriptions of facts and value judgments does not exist. For Putnam (2017, p. 30) the work of both Dewey and James shows that value propositions are “are rooted in real natural facts about human nature and about real human environments”. Considering Putnam’s understanding of the value propositions, once again, one may reinforce the pragmatic view of human being as being merged in an experiential continuum of nature and social contexts – in fact, Putnam (2017, p. 30) stresses that his essay is “addressed to naturalists in ethics”. For him, of course, the idea of naturalism is not that of reductionism as a reversion of the naturalistic fallacy: that is, to derive “ought to be” from “is”.

We do not need to reconstruct the naturalistic fallacy here. It is obvious that while science describes facts, human beings establish values in their relationship with the world and with each other. Considering the human condition in the world, the point is not that of a gulf between two insular regions such as science/fact and life/value. In James’s pragmatism, the naturalistic view of human beings lies in affirming the experiential continuum of world and mind. If this picture of human beings expresses an ontological sense, it also reveals an epistemological one: “from their own bodies, human beings are holistically embedded creatures” (MALACHOWSKI, 2013, p. 40).

In contrast to the dualistic culture typical of western philosophy, the naturalistic sense of pragmatism is the response to a worldview centered on dichotomies of knowledge/reality, fact/value, and experience/world. As a consequence of this response, beyond an epistemological account, the pragmatic portrait of human beings reflects a form of holism: if someone believes that eagles are efficient raptors, it has certainly satisfactory “practical consequences that spin out holistically across the relevant community” (MALACHOWSKI, 2013, p. 43): that is, the belief “the eagles are efficient raptors” is holistically merged in an experiential continuum of fact, meaning, value and context.

This is not only an image of human beliefs, but it is also an image of knowledge free from representation and subject to revision. Based on the concept of “ambulation” as transitional process, incidentally, William James (1978, p. 221) asserts not only the holistic character of knowledge, but the pragmatic conception of human beings as being holistically embedded in the world in stark contrast with traditional dualisms such as knowledge/reality, fact/value and experience/world.

8 In the philosophy of mind, representational theories assume that propositional attitudes are the core concept for representing mental content. With representational content, propositional attitudes are mental states and in general terms, instancing propositional attitudes, verbs express terms of folk psychology. Among many different mental states, “belief” is taken to be the canonical example of a propositional attitude. In A believes p, for instance, the verb expresses the relation of a cognitive agent (A) and a proposition (p) which represents the mental content ascribed to the agent: “Fred believes that fleas have wings” (STALNAKER, 1999, p. 678). As propositions are semantically evaluable, they can correctly represent the world. Considering James’s pragmatic principle, one can hardly think of the meaning of mental states as being represented by propositional attitudes. In the case of belief, pragmatically, meaning is far from expressing representational content and it is much more a reference to action and practical effects. For Peirce, in addition, a belief establishes a “rule of action” or a “habit”: “belief is a rule of action […] the essence of belief is the establishment of a habit, and different beliefs are distinguished by the different modes of action to which they give rise” (PEIRCE, 1966, p. 121).
5 Value, meaning and the ethical dimension of James’s pragmatism

Throughout the development of William James’s intellectual itinerary, his effort to ally pragmatism and empiricism as both being grounded on a pluralistic framework is evident.9 Not only in terms of a worldview, but also in terms of the significance that pluralism acquires for human life. For James, given that human beings are not apart from world and instead they active participants embedded in different social and cultural contexts, pluralism asserts that the idea of single point of view in relation to meaning and value makes no sense. In his essays On a certain blindness in human beings (1977), for instance, James observes that we hardly come to understand the world experienced by someone else in a way different from ourselves: that is, we are mostly blind to see differences such as meaning and value in terms of good or ill. By incorporating pluralism, nevertheless, James does not compromise with some sort of relativism; instead of that, pluralism means that “there is no single formula for deciding moral questions” (BACON, 2012, p. 38).

By extending Peirce’s principle of pragmatism in his lecture What Pragmatism means (1977), William James considers its psychological effects on everyday life besides its ability to identify meaningful sentences: “to develop a thought’s meaning, we need only to determine what conduct it is fitted to produce: that conduct is for us the sole significance” (JAMES, 2000, p. 25). According to James’s conception of the “pragmatic method” (which develops “the principle of Peirce”), each notion should be interpreted by tracing its respective practical consequences” (JAMES, 2000, p. 25). In James’s pragmatic method (2000, p. 36), even in the case of theological ideas, if they are “in relation with other truths, they prove to have a value for concrete life and have to be acknowledged”. James, in Will to Believe, for instance, systematically puts this methodological aspect of pragmatism to work.

Grounded in the notion of practical consequences in opposition to a representational way of thinking, James’s understanding of pragmatism indicates an exit route for the dissolution of fact-value dualism – as being two epistemic separate domains – since practical consequences refer to a matter of what may happen alternatively to what is. In James’s conception of pragmatism, arguably, one finds a theory of meaning and value that transits from epistemology to moral and ethics. Considering moral questions, James’ pragmatic method assumes that they have a separate criterion of justification: why it is reasonable to hold a belief and what may happen for someone to adopt a belief. In the case of ethical notions such as “good”, in a practical sense, they express meaning and value for human life.

In James’s pragmatism, there is no way of asserting the existence of facts and values in an absolute and separate way. Nonetheless, even while discrediting dualism, the issue remains as to in what sense value and meaning take place in a world of facts. As an anticipation of his pragmatic method, James confronts this issue in The Moral Philosopher and The Moral Life (1891) and later in The Place of Affectional Facts in a World of Pure Experience (1905). In the work of 1891, even addressing the question as being metaphysical, James points out that the words “obligation”, “good” and “ill” do not appear to have an application or relevancy in a world without existing sentient life. In a world of absolutely raw facts, there is no room for the words “obligation”, “good” and “ill” to refer to the value of anything at all – that is, only in a world of sentient beings, one may find readiness for “obligation”, “good” and “ill” to incorporate meaning and moral value as they can make difference.10 In his lectures on pragmatism, moreover, James (2000, p. 28) insists that words acquire meaning according to their “practical cash-value” within the stream of our experience.11 In James’s pragmatism, incidentally, the

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9 “This is pluralism, somewhat rhapsodically expressed [that is] There is no possible point of view from which the world can appear an absolutely single fact” (JAMES, 2010, p. 6).

10 Illustrating an alternative to fact-value dualism, it can be said that having sentient life as a condition, meaning and value develop in many levels: “although sucrose is a real and present condition of the physicochemical environment, its status as food is not. That sucrose is a nutrient is not intrinsic to the status of the sucrose molecule; it is, rather a relational feature, linked to the bacterium’s metabolism. Sucrose has significance or value as food, but only in the milieu that the organism itself brings into existence” (THOMPSON, 2007, p. 158).

11 In their respective understandings of experience, pragmatists find no consensus. What can be taken for granted is that pragmatists adopt “accounts of experience and perception radically different from the views of modern empiricists from Locke and Hume to Rudolf Carnap. [And]
notions of “cash-value” and “stream” are crucial for clarifying that meaning and value are definable in dynamic terms. To illustrate this point, very briefly, let us revisit James’s indeterminism.

Originally a topic in his discussion of determinism and free-will (in The Dilemma of Determinism), James (2010, p. 88-89) by “indeterminism” means a “free-will theory of popular sense [which] gives us a pluralistic, restless universe, in which no single point of view can ever take in the whole scene”. According to James’s indeterminism, rather than being derived from a mental faculty (as an inflection point from the world) control over one’s actions (pace Augustine, Aquinas, and Kant), free will is not defined within a transempirical category, but it emerges from the continuum of experience. For James, free will has nothing to do with a “supernatural agent” and it means “novelty” in “activity-situations”. In The Pluralistic Universe, James demonstrates this point:

Free will was supposed by my critics to involve a supernatural agent. As a matter of plain history, the only free will I have ever thought of defending is the character of novelty in fresh activity-situations. If an activity-process is the form of a whole field of consciousness, and if each field of consciousness is not only in its totality unique (as is now commonly admitted), but has its elements unique (since in that situation they are all dyed in the total), then novelty is perpetually entering the world and what happens there is not pure repetition, as the dogma of the literal uniformity of nature requires. Activity-situations come, in short, each with an original touch. (JAMES, 1977, p. 290).

Incorporating a transempirical sense, James’s understanding of free will is not that of an inflection-point gulping mind from world. As remarked by Ralph B. Perry (1935, p. 664), for James, free will is not “an agent intruding itself into natural processes *ab extra*” nor does it mean a “jump abruptly in”; in considering the meaning of free will, the character of “novelty” leaves “the sense of continuity undisturbed” in the field of experience. By this, once again, James radicalizes the very category of continuity as being central to understanding the genesis of free will in the world.

Pragmatically interpreting free will, moreover, James (2000, p. 55-56) understands that “free will means *novelties in the world*” in the sense that “the future may not identically repeat and imitate the past” and “the possibility that things may be better”: although inhabiting a pluralistic and restless universe, for human being, acts of choice are open to possibility and nothing is determined in advance: that is, a choice does not exclude others which are equally possible. For James, this line of thinking not only opens the possibility for the justification of free will (against determinism), but also the possibility for meaning and moral values to be all dynamic and revisable. In terms of James’s indeterminism, “being dynamic and revisable” does not mean a claim for relativism, but it is rather the idea that human beings are active participants embedded in specific contexts of experience.

In The Notion of Consciousness, interestingly, James coins the expression “web of experience” to assert that experiences succeed one another and enter varied relational contexts. At this point, for James, “the two kinds of fields (physical and psychical) are made up of experiences” (James, 1977, p. 191; 193). By using the notions of “web” and “field”, James strives to make continuity a central category not only in his understanding of experience, but also as a category that defines the process of knowledge as a series of intermediary experiences: in this process, while one field becomes a psychical pole, another one becomes a physical pole.12 For James (1977, p.194), the attributes “subject” and “object”, “represented”

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12 "James has a vivid picture of a grid in which the careers of minds and bodies can both be represented by different trajectories of the basic pure experience. In one such trajectory pure experience maps a line corresponding to some person’s mental life; in another it maps a line corresponding to the temporal development of a physical object. When the person experiences that object the two lines intersect and, as we might say, the mind is in contact with the object; but both before and after that point the two lines naturally diverge" (BIRD, 2008, p. 424).
and “representative”, “thing” and “thought” mean a “practical distinction” in experience and as such it is not ontological as understood by classical dualisms.

Given that category of continuity in both experiential and epistemological senses central in James’s pragmatism, it is fair to say that it can also be applied to our understanding of meaning and values insofar as people are constantly in transaction with certain contexts. In his review of pragmatism regarding the hypothesis of meaning as an “embodied process”, Mark Johnson foregrounds “the primacy of continuous organism-environment interactions”: “namely, recurring patterns of that interactive process that we notice and respond to, given our particular bodily capacities, needs, values, and social relations […] meaning emerges for organisms that are embedded and acting in the world” (JOHNSON, 2017 p. 37; 45). In James’s *Principles of Psychology*, incidentally, we read:

> Mental facts cannot be properly studied apart from the physical environment of which they take cognizance […] The richer insight of modern days perceives that our inner faculties are adapted in advance to the features of the world in which we dwell, adapted, I mean, so as to secure our safety and prosperity in its midst. (JAMES, 1983, p. 3).

Considering the primacy of continuous organism-environment interactions by which it is not possible to trace a definite boundary line separating the mental from the physical environment, in comparison with meaning and value, we cannot unequivocally set them apart from a process of continuity.

For James, in fact, the requiredness of meaning and value must incorporate a form of pluralism. In *The Place of Affectional Facts in a World of Pure Experience* (1905), James argues that, in human experience, things may possess different qualities: the same thing may manifest physical properties (when taken in one context of experience) and properties of a psychical value (when taken in another one). In this sense, for James, the preciousness of a diamond in a context of experience is a quality of the gem and it is a feeling of our mind in another one: expressing a dual property, the preciousness of a diamond indicates objective and subjective facts of experience. In James’s *On a Certain Blindness in Human Beings*, additionally, we read:

> Our judgements concerning the worth things […] depends on the feelings the things arouse in us. Where we judge a thing to be precious […] is only because the idea is itself associated already with a feeling […]. (JAMES, 2009, p. 1).

With respect to the feelings the things arouse in us, the preciousness of a diamond expresses an “affectional fact” (HEFT, 2017, p. 122). Insofar as there is a dynamically constant relation connecting the contexts of experience, the differentiation of a feeling (as preciousness of a diamond) is derived from the very flux of experience (more than from an intellectual activity) which changes over time.

For James, because of the temporal character of experience, it makes no sense to claim that objective and affectional facts stand for epistemically different domains. Instead, when considering the statement “the preciousness of a diamond is a quality of the gem”, while in one context of experience, the “is” corresponds to a description, in another one, it expresses an evaluation — that is, there is no fixed meaning (of “is”) due the dynamic and plural character of experience.

In a world of sentient beings, however, “interests” make a difference in some contexts of experience and they create space for novelty, meaning and value. In such a world, as interest is a form of requiredness, things are felt (or not felt). In a world of sentientless beings, given that things do not acquire meaning and value by themselves, interest (as a kind of requiredness) cannot come into existence. In Wolfgang Donationell, 2017, p. 258).
Köhler’s *The Place of Value in a World of Facts* (1939), incidentally, this is one of the main theses. In a world of merely mineral facts, for instance, no context suggests that diamonds can be felt – *to be felt* makes a difference in terms of value and meaning. As an object of interest, the preciousness of a diamond is felt as a meaningful fact and contextually value-laden. The notion of “interest” is a relevant topic in James’s intellectual itinerary (1879; 1983). For James, the mind is selectively active, i.e., it is interested in some parts of the objects; in the ethical domain, certainly, the role of interest is universally recognized.

Rejecting dogmatism, in *The Moral Philosopher and The Moral Life*, James (2010, p. 97) asserts: “there can be no final truth in ethics more than in physics”. For James (2010, p. 102), ethical and physical sciences “bide their time” and so they are “ready to revise their conclusions”. By endorsing a dynamic pluralism in ethics as well as in science, nevertheless, James does compromise to relativism. Rather, he maintains that there is no single point of view for setting facts, values, and meanings. In many contexts, such as ethical ones, facts are not indifferent (PUTNAM, 1995, p. 3; 7; 13). For James fact and value depend on and condition one another, i.e., they are interpenetrating and interdependent – that is, there are no absolute facts and values. In line with Hume’s criticism, particularly, James uncurtains the logical fallacy, also known as naturalistic fallacy, which argues that a statement of value (“ought”) can be inferred from a statement of fact (“is”). For James, interpenetrating and interdependent in a sort of dynamical looping, fact and value are co-participants of a single process in human experience.

In *The Moral Philosophy and the Moral Life*, as remarked by Hilary Putnam (1995, p. 22), James anticipates Wittgenstein’s *Private Language Argument* in his *Philosophical Investigations* according to which the meaning of a word presupposes external conditions for being accomplishing successfully and even in the case of words as reference to sensations: when I say “I am in pain” or “toothache”, the words “pain” and “toothache” do not refer to something that only I can know; on the contrary, it is evident that other people know exactly what I mean (see WITTGENSTEIN, PI, 243). In the uses of words such as “good”, “ill” and “obligation”, for James, these do not imply in abstract natures regardless of personal instantiation: “these words […] are objects of feeling and desire, which have no foothold or anchorage in Being, apart from the existence of actually living minds” (JAMES, 2010, p. 97-98). In James’s “pragmatic method”, “you must bring out of each word its practical cash-value within the stream of experience” (James, 2000, p. 28). In comparison with Wittgenstein’s *Private Language Argument*, even in the case of words as reference to the vocabulary of the so-called folk psychology (belief, desire, intention, etc.), it is fair to claim that their meaning is embodied in linguistic and social practices (and therefore contextually embedded) more than abstractly derived from mental representations. If one considers a parallel between James’s practical effect and Wittgenstein’s use-theory, it is certain that they converge on the critique of meaning derived from mental states representing objects or states of affairs in the world. Here, once again, the understanding of meaning is shifted from reference to use and in the case of ethical terms such as “good”, “ill” and “obligation”, they are much more the expression of doing things in human life rather than the representation of mental entities.

In James’s pragmatism (and in his radical form of empiricism), the rejection of fact-value dualism is clear. As a result of the understanding of fact and value as interpenetrating and interdependent, one may admit a “many worlds” interpretation (PUTNAM, 1995, p. 15). According to quantum mechanics, there may be “many worlds which exist in parallel at the same space and time as our own”.14 With the rejection of fact-value dualism in James’s pragmatism (and in his radical form of empiricism), arguably, the door is open to a many worlds interpretation.

In his essay *On a Certain Blindness in Human Being*, James emphasizes this form of a many worlds interpretation (which repeatedly he calls “pluralism”): “Now the blindness in human beings […] is the blindness with which we all are affected in regard to the feeling of creatures and people different from ourselves” (JAMES, 2009, p. 1), and:

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It absolutely forbids us to be forward in pronouncing on the meaninglessness of forms of existence other than our own; and it commands us to tolerate, respect, and indulge those whom we see harmlessly interested and happy in their own ways, however unintelligible these may be to us. Hands off; neither the whole of truth or the whole of good is revealed to any single observer, although each observer gains a partial superiority of insight from the peculiar position in which he stands. Even prisons and sick room have their special revelations. (JAMES, 2009, p. 26).

In several parts of his work (see 1983; 1897; 1977), insistently, James describes a form of many worlds interpretation: that is to say, there is no single point of view of the world, fact, meaning and value existing independent from concrete contexts of experience.

Rooted in a form of naturalism according to which mind and world are parts of an experiential continuum, James’s pragmatism breaks away from the traditional dualities such as theory-practice, knowledge-reality, or fact-value. In doing so, James regards humans as practical beings – in this point, for James (2000, p. 28), “theories become instruments, not answers to enigmas, in which we can rest. Pragmatism unstiffens all our theories, limbers them up and sets each one at work”. By drawing attention to human practices of living, James’s pragmatism is naturalistic, pluralistic, developmental, and experiential: individual practices are gradually distinguished and contextually situated as criteria of decision-making for meaning and value to take place in human life.

6 Köhler: the place of value in a world of facts

In the previous section, I considered James’ view that “interests” make a difference in some contexts of experience and that they are a form of requiredness for things to be felt (or not felt): if they are felt, interests create space for novelty, meaning and value. In a world of sentientless beings, given that things cannot be felt, meaning and value do not come into existence. In Wolfgang Köhler’s *The Place of Value in a World of Facts* (1939), incidentally, this is one of the main theses. In this work, originally presented at the William James Lectures in 1934-1935, even indirectly, Köhler roots back his lectures to James’s *The Place of Affectional Facts in a World of Pure Experience* (1905). For Köhler, in certain human behaviors, objects and activities do not appear as indifferent facts but as objects of interest and therefore loaded with value and meaning. As I see, this idea converges with James’ understanding that “interest” makes a difference in some contexts of experience.

In Köhler’s theory of value, to the extent that it incorporates a structural perspective, contradicts an intellectualist view according to which the “requiredness” of an object or activity is derived from a property of the mind. For Köhler, value as a sort of structural requiredness, is externally determined insofar as it consists of interest placed contextually. In *The Place of Value in a World of Facts*, by incorporating a pragmatic way of thinking, it is notorious that Köhler discredits fact-value dualism. In this sense, while James regards that interest makes a difference in some contexts of experience and creates space for novelty, value and meaning, Köhler assumes that interest means a kind of requiredness in human behavior as a vector of acceptance or rejection of objects, events, or tendencies in specific contexts.

In *The Place of Value in a World of Facts*, critically, Wolfgang Köhler underlines that the world of natural sciences is a “world of nothing but” – the famous expression coined by Julius Huxley for depicting the ideal of objectivity in the world of science:

Objective nature is a world of Nothing But […] “Nature is a dull affair, soundless, scentless, colorless; merely the hurrying of material, endlessly, meaninglessly”, and thus it is no good. Human experience is not dull, it is hill of sounds, scents and colors; it has ends and it has meanings. (KÖHLER, 1939, p. 15).
Using the words of William James, Köhler (1939, p. 34) remarks that the hurrying of material, endessly, meaninglessly of the world of facts as promoted by this ideal of objectivity means that *scientia fiat* to the detriment of value and meaning in human experience. While science seems to be stuck on the world of *nothing but* without the understanding of requiredness, Köhler argues that the human activities are clearly invested by interest as a sort of requiredness insofar as some things “ought to be” (and others not). For Köhler (1939, p. 35), however, as natural science is interested in understanding mere fact, it lacks the understanding of “ought to be” as a requiredness in all human activities.

Köhler, as one of the pioneers of gestalt psychology, draws attention in an original way to the perception that the term “Gestalt” means a specific organization beyond the limits of sensory experience, instancing processes such as learning, remembering, striving, emotional attitude, thinking, acting, and so forth (Köhler, 1975, p. 178-179). By “gestalt”, accordingly, Köhler means a specific organization in the sense that the relation among co-acting elements is of fundamental importance in understanding the whole. As well remarked by Harry Heft (2001, p. 203-4), William James’s radical empiricism and Gestalt psychology have much in common. Both locate meaning as a central and intrinsic quality of (psychological) experience. In experience, for James, without presupposing either the stuff of matter or mind, there is only *data* and a field that develops itself under the category of continuous relations. As a result of these continuous relations, meaning emerges dynamically in the structure of experience. For James and Gestalt psychology, accordingly, meaning cannot be reduced to a mechanistic understanding. In line with this way of thinking, for Köhler, “value” is understood from a structural interpretation as a sort of “requiredness” in the development of a Gestalt structure.

Differently from Kant’s intellectualism, in Köhler’s sense (1939, p. 48), the “requiredness” of an object or event is not supposed to be internally derived from a mental property. For Köhler, as a sort of structural requiredness, interest is contextually placed. In this sense, opportunistically, the notion of interest acquires methodological worth once it defines value as a vector space: something ought to be meaningfully “accepted” or “rejected” within a certain context integrating individual and environment.

For Köhler, “valence” means the acceptance or rejection of object or event as a sort of structural requiredness in the psychological world. In the sense that some things obtain “value” as they ought to be meaningfully good or bad in human activities, valence incorporates a vector space of acceptance (“valence +”) or rejection (“valence –”): while a positive valence corresponds to a force field in which all forces are facing the same direction, a negative valence represents forces facing in opposite directions. Being a sort of structural requiredness, Köhler’s theory of value synergically extends Kurt Lewin’s “vector psychology” (1936):

By the description of positive and negative valences, Köhler refers to the dynamic topologies integrating individual and environmental contingencies in which value and meaning take place. In this sense, even in ethical contexts, the notion of vector suggests that value and meaning incorporate specific topologies with periods of stabilization as being the acceptance or the rejection of an object or an event. Being dynamically determined, the duration of the stability of acceptance or rejection depends on an
individual’s interest in specific contexts of experience. Here, considering Köhler’s theory of value, I am not suggesting a form of relativism. What I have in mind is rather that interest is an epochal event, that is, it lasts spatio-temporally. In parallel with Henry Bergson’s vocabulary, “epochal” means “durée” (or duration) whose sense James agrees with entirely.

In his theory of value, systematically, Köhler (1939, p. 35) underlines that the notion of interest draws a line of differentiation between sentient and sentientless worlds. In a sentientless world (like the inorganic world, for example), while the requiredness for interest is lacking, in the sentient world, things are loaded by interest and therefore populated with meaning and value.15 In *The Place of Value in a World of Facts*, the understanding that interest is a distinctive trait of differentiating the physical and psychological worlds is one of Köhler’s main theses. In Köhler’s theory of value, the conception of requiredness is not something intrinsically determined by a mind property. In comparison with James’s sense of interest, Köhler (1939, p. 59) regards the requiredness for meaning and value as equivalent to “useful” or “expedient”.

In this operation, arguably, Köhler endorses James’s pragmatic theory of truth as equivalent to a theory of meaning (and value): i.e., equivalent to “useful” or “expedient”, the requiredness for meaning and value lies in the pragmatic sense of interest: that is, some things are loaded by interest (and some things are not). For James and Köhler, very shortly, interest is a condition for meaning and value insofar as it pragmatically makes a difference in human life.

7 Final remarks

From so-called classical pragmatism, the traditional dualities such as theory-practice, knowledge-reality and fact-value lose meaning since mind and world are understood as parts of an experiential continuum. Drawing attention to meaning and value in human practices of living, moreover, pragmatism sees humans as also social beings: individual practices are gradually distinguished and contextually situated as the ultimate criteria of decision-making for meaning and value be embedded in human life (including science as one among many human practices). In doing so, pragmatism incorporates an ethical dimension.

Tracing a parallel between James and Köhler with respect the requiredness of meaning and value, it is only in a world of sentient beings that one finds such requiredness in the form of “interest”. In such a world, ‘interest’ makes a difference in some contexts of experience and then it creates space for meaning and value. For James, however, interest is set on a pluralistic bedrock: in the dynamics of experience, things are felt (or not felt) as objects of interest. In terms of James’s pragmatism, as alternative to the traditional dualities (theory-practice, knowledge-reality, fact-value, and so on), this pluralistic view supposes that each form of interest is an appropriate explanation (for a particular level of an individual’s interaction with specific environments) and condition for the genesis of meaning and value in human practices of living.

Appendix: evolutionary biology as a historical science: an illustration of breaking down fact-value dualism

The German biologist Ernest Mayr, along with Theodosius Dobzhansky, George Simpson, and Julian Huxley, is an exponent of the New Synthesis in Biology in the 30s of the 20th century: a movement to

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15 In William James’s paper, *Are We Automata?* (1879), incidentally, he draws attention to “interest” and “selection” as being an effective procedure of mind’s structure in relation to its physical environment. This indicates that the condition for meaning and value is a world where “interest” makes a difference.
reorient the theories of evolution of Darwin and Wallace in light of Genetics; what has become known as Neo-Darwinism. In the second period of his work, nevertheless, Mayr undertakes a reflection on the theoretical foundations of Biology from which results the construction of Philosophy of Biology. For Mayr, the theoretical review of the foundations of Biology will indicate an alternative epistemological path: the traditional methods of theoretical reduction do not apply to Biology. Thus considered a unique and autonomous science, Biology will be understood as “historical science” and its method will be “hypothetical narratives”. Mayr claims that the evolutionary processes are historical events over time and whose method of analysis consists of reconstructing evolutionary scenarios through hypothetical narratives.

Published one year before Ernst Mayr’s death at the age of 100, in *What Makes Biology Unique?*, the great evolutionist argues in favor of the scientific autonomy of biology. By this, I think, Mayr illustrates the criticism of Giancarlo Marchetti and Sarin Marchetti. For Mayr (2004, p. 11), methodologically, the old classification of the sciences should be abandoned, i.e., the one that draws a definite line between the natural sciences and the humanities according to the understanding of the humanities based on the German word *Geisteswissenschaften* (in opposition to *Naturwissenschaften*; respectively, non-empirical and empirical sciences). In his understanding of biology, Mayr affirms that since it is not reducible to physical sciences, evolutionary biology is similar to historical science and so is different from physics in conceptualization and methodology: instead of drawing a definite line between the natural sciences and the humanities, one “might place this line between functional and evolutionary biology, attaching functional biology to the natural sciences and evolutionary biology to the science of history” (MAYR, 2004, p. 12).

In this sense, Mayr’s hypothesis states that evolutionary biology is a historical science. By introducing the concept of “historical narratives”, methodologically, Mayr distances himself from reductionism in biology:

> The methodology of historical narratives is clearly a methodology of historical science [...] This, incidentally, shows the weakness of the old classification of the sciences, which was made by philosophers familiar with the physical sciences and the humanities but ignorant of the existence of biology. (MAYR, 2004, p. 31).

By introducing the concept of “historical narratives”, in an original way, Mayr has in mind the reconstruction of “evolutionary scenarios”. As remarked by David Ceccarelli (2020), the use of historical narratives represents a shift in the study of organic change that presumes interdisciplinary dialogue among science, epistemology, and history of science.

For Mayr, in proposing the historical narratives (including the life history of our ancestors), one may reconstruct a rather convincing hominid history. To develop the concept of “historical narratives” in his own methodology, Mayr (2004, p. 25) employs the expression “tentative scenarios”. By using this expression in evolutionary biology, Mayr aims at the provisional reconstruction of biological phenomena such the extinction of the dinosaurs, the origin of humans, the origin of evolutionary novelties, the explanation of evolutionary trends and rates, the explanation of organic diversity, and so on. In Mayr’s view, trying to explain these phenomena is to find answers to “why?”:

> Evolutionary biology tries to find the answer to “why?” questions. Experiments are usually inappropriate for obtaining answers to evolutionary questions [...] in historical biology, a remarkable new heuristic method has been introduced, that of historical narratives. (MAYR, 2004, p. 32).

To find answers for *why* cannot be converted into mere description of facts. If what Mayr calls “functional biology” is compatible with reductionism, the time factor refers to aspects of evolution that belong to the field of historical biology whose method and principle are different from those of
the physical sciences. In an attempt to provide answers for “what for?” or “why?”, the evolutionary biologist, and in the absence of appropriate experiments, elaborates historical narratives. The recreation of evolutionary scenarios aims at answering certain types of questions such as what for or why, for instance, cats have sharp, pointed, curved, retractable nails, etc.

For Mayr, notably, there is an evaluative sense of understanding evolutionary facts (such as the extinction of the dinosaurs, the origin of humans, the origin of evolutionary novelties, the explanation of evolutionary trends and rates, and the explanation of organic diversity, and so on) that cannot be represented by descriptive statements. In this sense, I think, Mayr’s concept of historical narrative (as a reconstruction of evolutionary scenarios) breaks away from the so-called fact/value dualism as expressing the opposition of description and evaluation.

In convergence with Marchetti and Marchetti’s review of so-called fact-value dualism, given that Mayr’s historical narratives stand for provisional statements, they may function as interpretation “towards a new picture of descriptive and evaluative understanding” of evolutionary facts. From “some degree of entanglement”, using Marchetti and Marchetti’s terms, Mayr’s concept of historical narratives breaks down the conception of fact and value as being two separate epistemic domains. In the sense of being a pragmatic reconstruction of facts, historical narratives are not free of interpretation and value. In Mayr’s view, however, the provisional statements that reconstruct historically the evolutionary scenarios are not divorced from empirical data and so remain subject to verification and falsification.

References


16 When we try to answer this question [What is Biology?], we find that biology actually consists of two rather different fields, mechanistic (functional) biology and historical biology. Functional biology deals with the physiology of all activities of living organisms, particularly with all cellular processes, including those of the genome. These functional processes ultimately can be explained purely mechanistically by chemistry and physics. The other branch of biology is historical biology. A knowledge of history is not needed for the explanation of a purely functional process. However, it is indispensable for the explanation of all aspects of the living world that involve the dimension of historical time – in other words, as we now know, all aspects dealing with evolution. This field is evolutionary biology (MAYR, 2004, p. 24).

17 In parallel with Mayr’s historical methodology in evolutionary biology, Stephen J. Gould answers the question “What is life?” as “a historical problem”. Participant in celebrating the 50 years of Erwin Schrödinger’s book What is Life?, firstly, Gould (1995, p. 27) questions the Vienna School’s “ideal of the unity of science” by which that “all sciences share the same language, laws and methods”. Secondly, as evolutionary biologist, Gould disagree with Schrödinger’s centre-piece of What is Life? that biological beings are “nothing but” physical objects of high complexity [and so] must ultimately be explainable by physical principles” (GOULD, 1995, p. 29). According to Gould, even being mistrusted and downgraded by traditional science, historical contingencies are as meaningful as anything else presented by nature (my italics). In many natural sciences, accordingly, understanding such contingencies is up to the narrative rather than deductive mode (GOULD, 1995, p. 36).


JAMES, W. Are We Automata?. *Mind*, n. 4, p. 1-22, 1879.


