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"Metaphysics Without Ethics is Blind": The Legacy of Hilary Putnam

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Abstract Two convictions underlie the following article. The first is that Hilary Putnam has been one of the greatest thinkers of our time, a philosopher who was able to propose groundbreaking ideas in virtually every area of philosophy. As the reader will see, the topics he tackled in his writings included questions of philosophy of science, philosophy of language, philosophy of mathematics and logic, philosophy of mind, metaethics, the fact-value dichotomy, the interpretation of Wittgenstein's later thought, the question of relativism, the analysis of rationality, the analysis of religious experience, the character of Jewish philosophy, the interpretation of pragmatism, the elucidation of the concept of truth, the question of realism, the relationship between mind and the world. The second is that the changes some of his positions underwent, far from being a point of weakness—as some critics have sometimes felt compelled to claim—reveal the freshness and genuineness of Putnam's way of philosophising and at the same time the essence of philosophical discussion itself.

Most of the obituaries and memorial articles that appeared soon after Hilary Putnam's death on 13 March 2016 in Arlington, Massachusetts (having been born on 31 July 1926 in Chicago, Illinois, he was a few months from his 90th birthday) have not failed to recall Putnam's cheerful and witty character—that mixture of curiosity, amusement and helpfulness he demonstrated toward life and his fellow human beings. A mixture that made him

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Internet Source A bibliography of Putnam's writings can be found at https://philosophy.fas.harvard.edu/files/phildept/files/hilary_putnam_bibliography_oct2014.doc.

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not only "one of the smartest and most impressive thinkers I have ever been privileged to meet", according to Noam Chomsky,[1] but one that also prompted such definitions as 'the laughing philosopher Hilary', as one of his closest friends, Ben-Ami Scharfstein, called him during a meeting in Tel Aviv University celebrating the publication of *Jewish Philosophy as a Guide to Life* (2008).

When you enter a Department of Philosophy for the first time, you are rarely told what philosophy is (this was in fact my own experience during my first steps as an undergraduate), so that you almost inevitably develop the idea according to which philosophy is what philosophers *say*, i.e. their theories—in brief, the history of philosophy. But there is another way of conceiving what philosophy amounts to, and this you come to realise only when you see what philosophers *do*. Philosophy is discussion, creativity, intuition, challenge, doubt, argumentation, criticism and self-criticism, effort at understanding reality and our place within it, and also an attempt to present all these aspects in the broadest and most systematic possible outlook. And the sheer joy of discussion—that after all is a sheer joy of life itself—is what Putnam conveyed to those attending his lectures, listening to his talks, or speaking with him. As he made clear in closing the conference in his honour that took place in June 2011 in Harvard, one of the tasks of philosophy is that which emerges from those passages in Plato's *Phaedo*, where Socrates' friends and disciples realize with great astonishment that, despite the fact that Socrates was about to die, it was still a great pleasure to talk philosophy with him. A task summed up by Putnam with the words "philosophy is fun".

This may lead one to think that, without an attitude of this kind, it would perhaps have been impossible to produce the vast contribution to virtually every aspect of philosophy that Putnam's legacy constitutes—from philosophy of science and philosophy of language to philosophy of mathematics, philosophy of mind, philosophy of religion, metaphysics, epistemology and metaethics, with the possible exception of aesthetics.[2]

An astonishing achievement, especially if you bear in mind that philosophy was not Putnam's only main interest as a student. In fact, as he later claimed, "I did not think of pursuing philosophy as a profession until my senior year at the University of Pennsylvania" (Putnam 2015, 8). Mathematics was one of his favourite topics as well.

1 Life and Career

As a matter of fact, Putnam's body of work includes "thirty papers in mathematical logic, recursion theory, and set theory (especially the 'fine structure' of Gödel's hierarchy L of constructible sets) and related fields: decision problems in number theory, including my contribution to the solution of Hilbert's Tenth Problem; the Davis-Putnam (or, later, 'DPLL' [Davis-Putnam-Logemann-Loveland]) algorithm for satisfiability in propositional calculus; and the field of formal learning theory, which I helped to found" (Putnam 2015, 13). However, despite the fact that this deep involvement in mathematics arose soon after having left school, he did not take any mathematics courses as an undergraduate, simply because he "was terrified of the idea of solving mathematical problems under time pressure, and hence of the idea of *taking examinations* in mathematics" (Putnam 2015, 13).

Thus, his major at the University of Pennsylvania (his first semester started in the autumn of 1944) was philosophy, even if it should be recalled that he fulfilled all the

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[1] Reported in Chakraborty (2017).

[2] Even though I deem Putnam (1976) to be one of the most illuminating accounts of the kind of knowledge literature gives us—a topic of central aesthetical interest.

requirements for a major in linguistic analysis (the course in which he met Chomsky for the first time) and German as well. Among the philosophy teachers of the time he was ever fond to recall there being C. West Churchman (whose course first interested Putnam in philosophy of science) and Morton White (who introduced him to logic, semantics, and classical American thought). It was the latter who suggested to Putnam the idea of applying for a graduate program in philosophy. And it was because at the time White was moving to Harvard that Putnam had the possibility to continue with him what would prove to be one of the most fruitful discussions of his career. It was in fact in Harvard that Putnam spent his first year as a graduate student, arriving in Cambridge in the beginning of September 1948 (in the following November he got married to Erna Diesendruch, his first wife, having a child, Erika, in 1955 when they were in Princeton), and from White Putnam gained the idea that the analytic-synthetic distinction is profoundly unsound.

From his second to his final year as a graduate student Putnam was at the University of California in Los Angeles, where he was colleagues with Stanley Cavell and studied under Hans Reichenbach—"unquestionably the best teacher I ever had" (Putnam 2015, 17). He wrote his Ph.D. dissertation under the latter's direction, defending his argument for the rule of induction and proving a theorem about the frequency interpretation of probability. So, when Putnam received the Ph.D. in 1951, he was a committed Reichenbachian who subscribed to verificationism, a position he later relinquished at the end of the Fifties. His first official experience as a teacher began in 1952—when Putnam obtained an Assistant Professorship at Northwestern University—followed by teaching at Princeton from 1953 to 1960. It is in these 8 years that Putnam became *Putnam*, developing ideas of his own and devising original programs of research in philosophy and mathematics: the years in the Princeton faculty "were the years of my real *Bildung*, both as a philosopher and as a mathematician" (Putnam 2015, 26). And while his development as a mathematician was mainly due to the presence of Georg Kreisel and Martin Davis at the Institute for Advanced Studies, in philosophy the great mentor was Rudolf Carnap.

Carnap lived with his wife in a little house on the campus, and Putnam used to pay him visits on a regular basis, engaging in philosophical discussions on a number of topics. This—combined with Putnam's teaching in philosophy of science and "the appearance of Stephen Toulmin's *The Philosophy of Science*, which I discovered shortly after Carnap left Princeton in 1954" (Putnam 2015, 36)—made him move gradually away from his early broad logical empiricist outlook to a more personal general philosophical stance in which philosophy of science is "concerned not just with formal theories and their supposed 'coordinative definitions', but with physical theories as intellectual objects with complex histories and complicated links to a variety of practices which were themselves complex" (Putnam 2015, 43). It is within this general stance that mould-breaking ideas flourished not only in philosophy of science, but in philosophy of mathematics, philosophy of language, philosophy of mind and metaphysics as well: the notion of the "contextually necessary", the account of the meaning and reference of theoretical terms and natural kind terms, the idea of conceptual relativity, the functionalist hypothesis about mental states, and the realist position. Of the many experiences Putnam had in those years at Princeton two deserve special mention: the one-semester leave at the Minnesota Center for the Philosophy of Science in the fall semester of 1957–58, and the invitation to talk at the 1960 International Congress on Logic, Methodology and Philosophy of Science.

The two leading figures at the Center for the Philosophy of Science were Herbert Feigl and Wilfrid Sellars, and disagreement with them proved to be highly stimulating in shaping Putnam's ideas about the analytic-synthetic distinction and his realist attitude toward geometry. As to geometry, discussion revolved around Adolf Grünbaum's philosophy of

space and time which Feigl and Sellars accepted and Putnam rejected as "conventionalist", whereas, as to the analytic-synthetic distinction, the clash with them led Putnam to write the first draft of "The Analytic and the Synthetic"—a paper whose importance for Putnam's future developments is hard to exaggerate. Moreover, in Minnesota he "even found time to do something I had never done before, which was to seriously study quantum mechanics" (Putnam 2015, 50).

The International Congress on Logic, Methodology and Philosophy of Science, August 1960, was important for two reasons: on the philosophical side, the paper Putnam read, "What Theories Are Not", allowed him to underline even more clearly his distance from logical empiricism under the banner of realism, and, on a more private side, because there he met Ruth Anna Mathers, "the love of my life and, since August 11, 1962, my wife. We met at a reception in honour of Rudolf Carnap [and] we were madly in love before the conference ended" (Putnam 2015, 53).

In the fall of 1961 Putnam moved to the Massachusetts Institute of Technology, having been appointed director of a new program in philosophy. Under this appointment he had the opportunity to select a slate of philosophers and shape a new philosophy department. Despite these demanding administrative duties, during the years he stayed at MIT he wrote a number of papers, prominent among which are those focusing on computer program functionalism and the interpretation of quantum mechanics.

Since his youth Putnam was deeply concerned with social and political issues, and during the years at MIT, and then at Harvard, this concern took the form of the organization of various campus protests, the start of a faculty and student committee against the war in Vietnam, and—in concert with the microbiologist and Nobel laureate Salvador Luria—"the creation of 'BAFGOPI', the Boston Area Faculty Group on Public Issues, which raised money from professors all over the United States to put full page advertisements in the *New York Times* opposing the war" (Putnam 2015, 81). This intense social activity was coupled with courses in Marxism and membership of the Progressive Labor Party, which was a Maoist group. This militancy did not last long, though. By the end of 1972 Putnam had become completely disillusioned with communism in general, and Maoism in particular: "'He should be shot' was a favorite expression, and I came to realize it was not just an 'expression' […] Marxism-Leninism, I came to realize, is not just an intellectual error, but a terrifying sickness of the soul" (Putnam 2015, 82). Putnam's political activism thus ended, apart from supporting Amnesty International till the end of his life.

From July 1965 to the end of his career Putnam taught philosophy at Harvard (he retired in 2000 and then became Professor Emeritus). From then on he wrote an incredible amount on a variety of topics (he once said he was a really speedy writer) and this production had a great impact on the international philosophical arena fostering discussion in many directions. Because of this, and in particular "for his contribution to the understanding of semantics for theoretical and 'natural kind' terms, and of the implications of this semantics for philosophy, theory of knowledge, philosophy of science and metaphysics", in 2011 he was awarded the Rolf Schock Prize in Logic and Philosophy (the equivalent of the Nobel Prize) by the Royal Swedish Academy of Sciences, and in 2015 the Nicholas Rescher Prize for Systematic Philosophy by the University of Pittsburgh, which added to the number of honorary degrees he had already received from universities all over the world.

Among the topics tackled in his writings there are questions in metaethics, the fact-value dichotomy, the interpretation of Wittgenstein's later thought, the question of relativism, the analysis of rationality, the analysis of religious experience, the character of Jewish philosophy, the interpretation of pragmatism, the elucidation of the concept of truth,

the question of realism, the relationship between mind and the world. As to the latter, he has claimed that "the major problem of philosophy [is] the problem of the way language and thought 'hook on' to the world" (Putnam 1983, 315), and that "the problem of intentionality has been a lifelong preoccupation of mine, and […] various changes in my position were occasioned by the realization that one or another assumption about the nature of reference led to deep difficulties" (Putnam 2013, 24). It was in fact this preoccupation that made him change from a conception of truth as correspondence embedded in what he then called a "metaphysical realist" picture, to a conception of truth as assertibility in epistemic good-enough conditions embedded in an "internal realist" picture, to a deflationary-tasting pluralist conception of truth embedded in a "natural realist" picture.

Regarding the "changes in my position" issue, I would like to stress that, far from being a point of weakness—as some critics have sometimes felt compelled to claim—it reveals the freshness and genuineness of Putnam's way of philosophising and at the same time the essence of philosophical discussion itself. Rarely, if ever, is the conclusion a given philosopher reaches after a certain amount of reflection permanent; rarely, if ever, does a philosopher manage to anticipate all the possible criticisms to a thesis of his or her. Quite the contrary, what is very often the case is that a theoretical conclusion can be reopened because new interpretations reveal aspects of a problem nobody had previously been able to envisage. From this perspective, Putnam not only had profound and remarkable insights into the problems he was addressing, but he also showed an unusual capacity for self-criticism, which made him re-interpret some of his former conclusions, leading him to the very heart of these problems. After all, criticism and self-criticism cannot but go hand in hand, and this is what sets philosophical discussion in motion. The alternative would be the death of philosophy itself. "If philosophical discussion is 'interminable', that seems to me a good thing, not a bad one. […] To give up philosophy, or any part of it (including 'metaphysics') would be like giving up serious political thinking or art or ethics or spiritual life. It would be a deep injury to the human spirit" (Putnam 2015, 90).

That spiritual life was for Putnam a very important part of the existence of human beings is revealed not only by his reflection in metaethics, but also in his being a practicing Jew. How he became a religious person is worthy of mention. He was a non-believer for all his life up to 1975. In that year, the elder of his two sons announced that he wanted to have a bar mitzvah, and Putnam and Ruth Anna agreed with the Rabbi of a Hillel congregation to go to the services with their son for a year. What happened is that "long before the year was over, the Jewish service and Jewish prayers had become an essential part of our lives […]. So I started to *daven* [say the traditional Jewish prayers] every morning (or afternoon, if I didn't find time in the morning), as I still do. […] I found it to be a transformative activity" (Putnam 2008, 2–3).

For a philosopher like Putnam this also meant opening a sort of gap between two sides of his own existence: the religious side and the naturalistic side. His deep consideration of the natural sciences and their importance in our culture could allow no room for supernatural entities like God, and so it is reasonable to think that those sides should be unavoidably kept apart. In fact, he did not come to reconcile these two sides until the end of the last century, when he decided to lecture on Jewish philosophy realizing that "for a religious person *theorizing* about God is, as it were, beside the point" (Putnam 2008, 6). One can subscribe to naturalism, but not to *reductive* naturalism: "reductive naturalists forget that the world has many levels of form, including the level of morally significant human action, and the idea that all of these can be reduced to the level of physics I believe to be a fantasy" (Putnam 2008, 5–6). Thus, one can consistently deny that God is an element of our ontology and maintain that he or she is a human construct, "although, in my

view, we construct our various versions of 'the available God' in response to deep human needs that we do not 'construct'" (Putnam 2016, 163), so that "it is not up to us whether our responses are adequate or inadequate" (Putnam 2008, 6). In the end, it is this "naturalistic theology that best reconciles my own spiritual needs with my critical intelligence" (Putnam 2016, 163).

2 Main Works: Analytic, Necessary, A Priori

As we have already seen, one of the topics at the centre of Putnam's first philosophical interest was the discussion about the analytic-synthetic distinction. At that time, the main reference in that discussion was—of course—W. V. Quine's celebrated *Two Dogmas of Empiricism* (1951), a paper that aimed to show that there is no rational basis on which to place the notion of analyticity. According to Putnam, however, Quine was too extreme in what appears to be the conclusion of his argument, namely that, since it is impossible to rationally argue in favour of the existence of analytic truths, *all* truths are synthetic—where "synthetic" was construed as "empirical". Putnam's own argument was in two stages.

First of all, he has maintained that our language does contain genuine analytic truths, even though they represent a small minority among the great variety of statements we can make. In fact, they just revolve around a hundred words, including the well-known "A vixen is a fox", "All bachelors are unmarried", and the like.

Secondly, he has stressed that—since Quine had inherited the Neopositivists' tendency to overlap the concepts of analyticity, necessity and a priori—his criticism toward analyticity was to be taken as a criticism toward the other two concepts as well. As one may rightly expect, having guaranteed talk of analyticity, Putnam went on to save also the concepts of necessity and a priori—and he did this in a very original way.

Exploiting a strategy destined to a wide fortune in contemporary philosophy, he invites us to consider a science fiction case. Suppose, he says, "that modern physics has *definitely* come to the conclusion that space is Riemannian", and "let us discuss the status of the statement that *one cannot reach the place from which one came by traveling away from it in a straight line and continuing to move in a constant sense*" (Putnam 1962, 239–40). Let us call this assertion S. Before the arrival of the so-called non-Euclidean geometries, the axioms and postulates Euclid formulated represented the "laws" to which bodies' movements in space necessarily obeyed, and from these laws it follows that S not only is true, but is necessarily so. It had the status of a necessary a priori truth.

When we come to the case devised by Putnam, however, the inconceivable happens: if space is Riemannian, the Euclidean parallel postulate is false, and S (which depends on it) is likewise false. A straight line can have a curvature that—when placed in a physical environment—allows one to reach in a finite amount of time the spot from where one started, although one is facing forward. Something having the status of a necessary a priori truth turns out to be a contingent a posteriori assertion. Is this S's actual status? Not exactly: Putnam's astonishing stance begins to take shape from the following claim: "Euclidean geometry as a theory of physical space was always a synthetic theory, a theory about the world, but it had the strongest possible kind of paradigm status prior to the elaboration of the alternative paradigm" (Putnam 1975, x).

A synthetic theory can be overthrown because of reasons gathered from experience: observations of natural phenomena, laboratory experiments and the like. Euclidean geometry, Putnam tells us, is a synthetic theory, but quite *sui generis* at that: before the

advent of non-Euclidean geometries no empirical evidence could have demonstrated its inadequacy. It served as a "paradigm", as a conceptual background against which it was possible to observe, explain, and foresee the many phenomena occurring in physical space. No experiment could ever be used to discard it, since any experiment one could contrive to do so would unavoidably make use of assumptions derived from it and, therefore, presuppose its validity. It was just because it appeared inviolable by every experiment that it was taken as a typical instance of a necessary a priori theory. The situation radically changes as soon as sound alternative theories are put forward—the only theories capable of giving theoretical conditions from which to devise experiments aimed at confuting Euclidean geometry: it then becomes clear that it is a synthetic theory.

So, what should we say about S, an assertion deduced from a theory which enjoyed a paradigmatic status until the arrival of one or more alternative theories? Putnam's answer is that S has the status of a necessary a priori truth as long as there are no alternatives to the paradigm on which it rests, and the status of a contingent a posteriori assertion when these alternatives come along and prove themselves sound. For assertions of this kind he coins the phrase "*quasi*-necessary relative to a given conceptual scheme" (cf. Putnam 1994b, 251).[3]

We therefore get a more faithful description of our language if, beside the small set of genuine *analytic* assertions and the set of genuine *empirical* assertions (i.e. liable to be corroborated or refuted by empirical observations), we acknowledge the existence of quasi-necessary assertions. For the sake of methodological convenience, Putnam proposes we reserve the label "synthetic" for the latter, namely assertions which are revisable in principle but not on the basis of the results of experience, unless these results are being interpreted by means of a theory alternative to the actual one. Until such a theory makes its appearance and is validated, quasi-necessary assertions cannot be jeopardized by experience, and therefore are "non-empirical", "non-a posteriori". In a nutshell, they are a priori. A couple of centuries after Kant, this is how one can speak of *synthetic* a priori assertions.

3 Main Works: Philosophy of Mathematics

This result could not have failed to have repercussions on Putnam's stance in philosophy of mathematics and logic, as the true propositions of both disciplines have been taken for centuries as the model of propositions knowable independently of every experience—and whose denial is rationally inconceivable, to boot. The upshot of this repercussion is a softening of the line dividing mathematics from empirical science: "in mathematics too there is an interplay of postulation, quasi-empirical testing, and conceptual revolution leading to the formation of contextually a priori paradigms" (Putnam 1975, xi). It is sufficient to look at the mathematicians' actual practice, Putnam maintains, in order to realize that "we do use quasi-empirical methods a great deal in mathematics" (Putnam 1975c, 69), methods that are closer to those used by natural scientists than to the demonstrative method traditionally considered typical of mathematicians.

Think for instance of the introduction of real numbers or the basic postulate upon which the subject of analytical geometry is founded—the postulate according to which there is a one-to-one order preserving correspondence between the points on the line and the real numbers. The Ancient Greeks lacked the mathematical experience to generalize the notion

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[3] This phrase amends the analogous "necessary relative to a body of knowledge" Putnam was using 30 years before.

of number, and therefore could not offer a rigorous justification in favour of this introduction. Yet, once it was shown "how great the 'pay off' of the correspondence postulate was, not only in pure mathematics but also in mechanics, there was not the slightest question of abandoning either the correspondence postulate or these generalized numbers, the 'real' numbers" (Putnam 1975c, 64–65). This is the heart of the matter: what led to the complete acceptance of the postulate and of real numbers—turning out to play a decisive role—was their *fertility* both in physics and mathematics, their *success* in facilitating calculations and conclusions, and not an indisputable *proof* of their validity.

The history of mathematics is full of examples of this kind, Putnam goes on—examples that show a very close similarity to the hypothetical-deductive arguments in the empirical sciences, where the results of some intuitively plausible ideas are subject to "empirical" control, and the positive outcomes of these controls strengthen the confidence in those ideas. Successful controls—or "quasi-experiments"—of this kind represent not a proof but a "verification" or "confirmation" of the assertion in hand. And, just like every verification, this quasi-empirical verification is not absolute but relative, in the sense that what has been verified here and now might turn out false in a future quasi-empirical control. This is why mathematics—and logic, for that matter—cannot be considered an a priori discipline in the classical sense: nothing excludes that its fundamental propositions might turn out to be false.

However, as in the case of geometry we saw above, the fact is that in order to refute them a deep conceptual revolution is needed that changed the background against which those propositions are placed and made a given confutative experiment intelligible. In the absence of such an alternative background, one may legitimately take those propositions as a priori—*relatively* a priori or, given that we are not talking about ordinary empirical propositions, *synthetically* a priori.

4 Main Works: Conceptual Relativity and Equivalent Descriptions

One of the topics Putnam insisted on throughout his entire career was the phenomenon of conceptual relativity—represented by the *cognitive equivalence* of sentences, theories, conceptual systems which, when taken at face value, are *incompatible*: e.g., two sentences saying different things about the same portion of reality and that, nevertheless, are both true. How can a state of affairs, which at first sight is so counter-intuitive, come to be?

Putnam clarifies the question on the basis of a series of examples:

> the choice, in formalized geometry, of taking points to be individuals or taking them to be convergent sequences of spheres […]; the choice, in a certain portion of classical electrodynamics, between taking the action between charged particles to be mediated by "fields" or by "point-source retarded potentials"; and […] the choice, in mathematical logic, between taking sets to be characteristic functions or taking them to be primitive objects and taking functions to be sets of ordered pairs (Putnam 2001, 432).

In all these cases nothing forces one to choose one alternative to the detriment of the other. Each theory and each sentence do justice to the phenomena exactly as the alternative theory and sentence do: they are perfectly equivalent.

Rather, the equivalence between the two sentences, and the two theories containing them, is explained via the fact that the former theory's primitive terms can be defined by

means of the latter theory's ones, so that any sentences expressed in the language of the former could be transformed in a sentence expressed in the language of the latter, and vice versa—without it being justifiable to say that one theory is more fundamental than the other: they share the same explicative and predictive power toward the same portion of the world. They are *cognitively equivalent*.

The point is that there exists no fact of the matter on the basis of which one could say that one description is right, and the other wrong. It is here that the epistemological and metaphysical value of the phenomenon of equivalent descriptions (and conceptual relativity, of which that phenomenon constitutes a particular instance) resides. In no case of two or more equivalent descriptions is it possible to precisely separate the role played by the (conventional) choice of an expressive mode from the role played by the facts: there cannot be a "*neutral* description", one which reports the facts in a way which is aseptic and devoid of human contribution, since every description is unavoidably "*partisan*" (cf. Putnam 1987, 97). Yet, this partisanship does not imply that the human cognitive enterprise comes down to a mere play of conceptual schemes and optional languages:

> Accepting the ubiquity of conceptual relativity does not require us to deny that truth genuinely depends on the behavior of things distant from the speaker, but the nature of the dependence changes as the kinds of language games we invent change (Putnam 1994c, 309).

Far from endorsing an idealistic stance and taking facts as a projection of the human mind, Putnam maintains that "some facts are there to be discovered and not legislated by us. But this is something to be said when one has adopted a way of speaking, a language, a 'conceptual scheme'. To talk of 'facts' without specifying the language to be used is to talk of nothing" (Putnam 1988, 114).

5 Main Works: The Functionalist Hypothesis

Let us now see the repercussions Putnam's conception of necessity and the a priori have had on his analysis of the human mind.

During the first half of the past century, two conceptions held a central position in the discussion about the relation between mind and body: *behaviourism* and the *identity* theory. According to the supporters of the former conception, only observable behaviours—or at most dispositions to behave—constitute the data the scientist can work on, and hence every mental element should be excluded. According to the advocates of the latter conception, this exclusion is a mistake, since we cannot deny the existence of genuine aspects of our mental life that have no relation whatsoever with behaviour. However, acknowledging this, they go on, does not amount to taking the mental aspects of our existence to be non-physical: far from having a spiritual nature, they are to be located in our neurophysiology. Being in pain, for instance, is nothing more than having a more or less intense stimulation of C fibres.

From the criticism to these conceptions Putnam begins to outline his own view of the human mind. Exclusive attention to manifest behaviour and disposition to it is unsatisfactory for a plausible account of our mental life, since we could imagine a group of "super-Spartan" people who are trained, generation after generation, to put up with even the most acute pain, suppressing every behavioural manifestation, to realize the intrinsic explicative limits of behaviourism. On the other hand, the mistake made by the supporters

of the so-called type-identity theory lies in exclusively focusing on human biology—on *C* fibres in the case of pain. It is enough just to focus not so much on the *C* fibres themselves, as the *role* they play within the global functioning of the organism in which they are embedded. This is a path Putnam found promising: paying attention not to what *C* fibres are, but what they do, the *function* they perform. If the function is what matters, then what determines a mental state *M* is not its physical substratum, but the functional relations that *M* bears to other mental states, sensory stimuli, and behavioural responses—relations which are of a causal kind. This is the functionalist hypothesis Putnam put forward at the beginning of the Sixties.

Putnam's apparently slight change of perspective was of great importance. If a suitable conception of psychology does not concern the *what* but the *how*, then it is clear that in principle any system, even an artefact, is able to have a certain mental state—provided that that system has an adequate level of functional organization. In brief, our psychology is closer to a computer's *software* than to its *hardware*. Hence, from an anti-reductionist outlook, Putnam maintains that possessing a mind constitutes "a real and autonomous feature of our world" (Putnam 1975d, 291): there is not only a physical reality, but a mental reality as well. As we can see, "the functional-state hypothesis is not incompatible with dualism" (Putnam 1967, 436), although Putnam's acknowledgment of an autonomous mental dimension needs "no mysteries, no ghostly agents, no *élan vital*" (Putnam 1975d, 303), and remains within a rigorous naturalistic perspective.

The functionalist hypothesis Putnam advanced gave rise to a program of research that was widely followed. However, Putnam gradually distanced himself from computational functionalism and the analogy which guided it—the analogy between the mind and a computer—and in the course of the first decade of the new millennium came to endorse a "liberalized" kind of functionalism.

One of the virtues of the functionalist hypothesis was the anti-reductionist spirit, expressed by the refusal to reduce the mental dimension to any other dimension considered as more basic—a physico-chemical substratum, for instance. Still, he realized that computational functionalism also had a hint of reductionism: after all, the identification of mental states with computational states was but a reduction of the former to the latter. A reason more than sufficient, in Putnam's eyes, to distance oneself from this stance.

But the decisive blow to functionalism came from one of the most important results achieved by Putnam in philosophy of language, namely that the meaning of most of our words—as well as the content of most of our thoughts—are not simply determined by our functional organization, are not uniquely a function of what happens within our heads, but depend in large part on the world external to the mind. Far from amounting to internal computational capacities, mental abilities are operative and interactive, versatile ways of functioning in continuous contact with the surrounding environment and realizable in constitutionally different systems (cf. Putnam 2013, 24–25). Let us see the conception of meaning in more detail.

6 Main Works: The Causal Conception of Meaning

During the Seventies Putnam published a series of essays dedicated to the analysis of the meaning of physical magnitude and natural kind terms, a series which peaked with *The Meaning of 'Meaning'*—an essay which shows, among other things, the impact his semantic conception had had on a general philosophical level.

In the first sections of the essay Putnam recalls the custom of distinguishing between intension and extension in the meaning of a linguistic expression, and notices that in the philosophical tradition the notion of "intension" had not been clarified properly, and was vaguely taken as a *concept*. Hence, the idea according to which meaning (in the sense of intension) is a *mental* entity, given that in this tradition concepts have usually been taken as something mental. This can be summarized in the following principle (I): understanding a term (i.e. knowing its meaning) amounts to being in a certain psychological state.

Another assumption deemed obvious by the secular reflection on language is the one according to which two terms cannot differ in extension and have the same intension. If the intension is the same, so is the extension. From this one can easily draw the principle that (II) "the meaning of a term (in the sense of 'intension') determines its extension" (Putnam 1975e, 219). The main aim of the opening part of the essay is to show that there is no notion—let alone a notion of meaning—able to satisfy both principles: in order to achieve this aim Putnam criticizes a *consequence* of the two principles, i.e. the thesis that the psychological state of a speaker using a given term determines the extension of the term. He does this by exploiting a scenario destined to be cited and discussed in various forms up to the present day: the *Twin Earth case*.

Suppose that in a galaxy far, far away there is a planet exactly identical to our Earth but for one detail: the liquid with the chemical composition H_2O that we on Earth call "water", on this planet has a different chemical composition, say XYZ. In saying that the planet is exactly identical to ours Putnam means that for every object, person, feature of the Earth there is an analogue on that planet; there is for instance a Doppelgänger for every terrestrial English-speaking person: it is a Twin Earth (TE) to all intents and purposes, apart from the chemical composition of the liquid which, just like on Earth, is used for quenching one's thirst, washing and cooking, that fills lakes, rivers and oceans, and is called "water" by the twin English-speaking persons. Notice that if we were to judge on the basis of the external appearance, the two liquids would be utterly indistinguishable, so that any terrestrials who landed on TE would fail to detect any difference, and would unhesitatingly call "water" the liquid that they would drink or use to wash on TE.

Suppose now that a time machine carries us back to an era in which chemistry was not developed up to the point where the difference between the two liquids could be discerned—say around 1750. No terrestrials landing in 1750 on TE would have been able to become aware of the difference: therefore, the mental state of a terrestrial using the word "water", and that of a twin terrestrial using the same word would have been the same—all the beliefs of the one about water would have been the beliefs of the other, and vice versa. Yet, the extension of the terrestrial's word "water" would have been constituted by all the samples of H_2O, just like in the present day, whereas the extension of the twin terrestrial's word would have been constituted by all the samples of XYZ, just like in the present day. And this shows that the extension of a term is not determined by the psychological state of the speakers who are using that term: the above-mentioned consequence of the two pivotal principles of traditional semantics is false. "Cut the pie any way you like, 'meanings' just ain't in the *head*!" (Putnam 1975e, 227). Yet this begs the question, where are they?

A first partial answer is that, although there cannot be necessary and sufficient criteria in the individual speaker's head to fix the extension of a word, knowledge of such criteria is nevertheless possession of the whole linguistic community, and this according to Putnam shows that, besides the well-known social division of labour, there is a *social division of linguistic labour*. So, if we want to pick out meanings, it is the society to which a given speaker belongs that should be examined in the first place.

This however is just a part of the answer; in fact, there is another more fundamental one. Before seeing what it consists of, let us try to answer another question. We have just seen that (in most cases) I can fail to know which object a natural kind term refers to, and despite this—in virtue of the social division of linguistic labour—I can use the term with the right reference. But how did I acquire the capacity to refer to the right objects in using that term?

In the same years in which Putnam was developing his ideas on the meaning of physical magnitude and natural kind terms, Saul Kripke was analysing proper names along lines that were to reveal more than one point of contact with Putnam's ideas (cf. Kripke 1972). Putnam acknowledged his debt toward Kripke in at least one aspect: just the way a speaker acquires the capacity to correctly refer to a given individual or a given set of individuals by using a term—this comes about thanks to a *causal chain of communication* (or *of reference*).

When a name is being given to a child, an animal, an unknown plant, a just discovered subatomic particle or a just manufactured object, a "baptismal ceremony" takes place whose *effect* is the introduction of a name in the language and its attribution to an object, a particle, a plant, a child and so on. The verbal and non-verbal actions performed by one or more persons *cause* a once-non-existent situation. Afterwards, the baptists' verbal inter-actions with other speakers bring about a transmission and circulation of the word throughout the linguistic community: those who learn the correct use from the baptisers in turn pass on this use to other speakers, shaping a chain of which every speaker constitutes a link tied to the preceding and succeeding ones by a causal relation. In substance, what is essential in order to correctly use a term are three things: (1) belonging to a causal chain, (2) possessing a minimum amount of information about the referent (the "stereotype", as Putnam calls it), and (3) intending "to use it with the same reference as the man from whom [one] heard it" (Kripke 1972, 96): the last aspect (the *referential intention*) is of crucial importance, if one does not want to risk breaking the chain of communication.

With this in hand, let us go back to the question "where are the meanings?" and see which part of the answer we have yet to consider—the more fundamental one. In order to grasp where the meanings of the terms analysed by Putnam are, recall that with the TE example he has shown the falsity of a *consequence* of the two pivotal principles of traditional semantics, (I) and (II). What we should now understand is which of the two principles is responsible for the falsity of the thesis that the psychological state of a speaker using the term "water" determines the extension of the term. To see this, consider what we implicitly mean when we point to a glass of water and say "This liquid is water" (in the case where we want to teach the use of the word to somebody, or just give her a piece of information). Our statement implies an empirical presupposition, i.e. that the sample of liquid in the glass is *identical* to most of the substance we and other speakers in our community have in other situations called "water"—the substance existing in our natural environment and to which we are causally linked from birth thanks to a myriad of direct and indirect interactions: H_2O. When we use the word "water" we cannot but mean the liquid existing in our world: therefore, everything that counts as water for us cannot but be H_2O, and everything that does not have this chemical composition *is not water for us*. In brief, for us water is H_2O in every possible world: the correct explanation of the meaning of the word "water" is that it is a relative meaning, and it does not mean on Earth what it means on TE. This implies, in the final analysis, that what determines the meaning of a natural kind word is the substance the word refers to, the substance a linguistic community is causally tied to: meanings are in the world. Thus, it is principle (I) that is to be ditched,

because it amounts to saying that the meaning of "water" is not relative in the specified sense, despite the relativity of the extension.

7 Main Works: Moral Philosophy

That one of the constants in Putnam's thought is a general anti-reductionist stance has been already stressed by describing his conception of mind. It is however in his reflection about ethics that this stance stands out even more prominently: in fact, Putnam argued in favour of the genuineness of the judgments regarding values, and held them to be susceptible to having a truth-value. In doing so he strongly opposed a secular tradition which is so rooted as to affect the basic intuitions of all of us.

Indeed, according to Putnam the ethical attitude of the majority of people reveals the conviction that there is a sharp and uneliminable dichotomy between beliefs about facts and beliefs about values. Yet, Putnam maintained it a rationally indefensible dichotomy. He followed two paths to show this: the first leads us to reason on what a fact is, and shows that the dichotomy presupposes a narrow conception of fact, whose origin is traced back to Hume.

For Hume facts were the objects of sensory experience, *impressions* gained by means of one or more of our five senses. But "if this is the notion of a fact, then it is hardly surprising that ethical judgments turn out not to be 'factual'!" (Putnam 2002, 22): nobody has ever had a sensory experience of ethical, aesthetical, juridical facts. It then becomes clear how this notion of fact (typical of classical empiricism and which survived until the twentieth century thanks to the backing of Neopositivism) is too *narrow*: it is the development of scientific research itself that has made this more and more clear. Facts regarding entities that a strict empirical perspective would consider unobservable and hence non-existent have been considered absolutely legitimate and a part of what any scientist worthy of the name would unquestionably take as an object of analysis. Given that talk about facts regarding bacteria, atoms, subatomic particles, spatiotemporal curvature and many others besides are by now quite widespread, "the idea that a 'fact' is just a sensible 'impression' would hardly seem to be tenable any longer" (Putnam 2002, 22).

The second path leads to the realization that facts and values are inextricably *intertwined*—an intertwining which lies beneath our description of facts both in scientific and ordinary language.

Putnam makes us notice that scientific research presupposes a particular kind of values: *epistemic* values. All we have to do is pay attention to what scientists actually do in order to realise that they try to build a representation of the world endowed with features such as coherence, comprehensiveness, instrumental efficacy, plausibility, reasonableness, simplicity, preservation of past doctrines and even beauty. These are, according to Putnam, epistemic values.

Scientific facts and epistemic values are therefore intertwined. However, it is our language in general that reveals a deeper intertwining between facts and ethical, aesthetical, juridical, political, religious values, and it is this intertwining that prevents the dichotomy between descriptive and evaluative linguistic uses from arising in the first place. It shows up especially in the case of some particular adjectives.

Among them there is the adjective "cruel". It can be used both for evaluative aims (e.g. when we say things such as "He acted in a very cruel way towards her") and descriptive aims (e.g. when an historian claims "He was a very cruel king"). In metaethics, concepts

which preside over the use of these adjectives are called *thick ethical concepts*, in order to distinguish them from *thin ethical concepts* presiding over the use of expressions such as "good", "right", "ought" and the like—which have just an evaluative character.

The discussion on thick concepts has been very lively for decades, and several points of view have been put forward. According to one thick concepts are actually factual, according to another they should be broken down and analysed into two constituents, the descriptive and the evaluative ones, and according to yet another perspective this breaking down is an impossible task. Putnam subscribes to the latter and takes the inseparability of the descriptive and evaluative aspects of thick ethical concepts as evidence of the unten-ability of the fact/value dichotomy, since the irreconcilable contrast that is often underlined between ethical statement and empirical descriptions is nothing more than a linguistic version of the dichotomy. For him an adjective like *cruel* "simply ignores the supposed fact/value dichotomy and cheerfully allows itself to be used sometimes for a normative purpose and sometimes as a descriptive term" (Putnam 2002, 35).

So, given that "every fact is value loaded and every one of our values loads some fact" (Putnam 1981, 201), we have that without values we would fail to have not only a physical world, but a human world as well:

> The world we inhabit, particularly when we describe human beings for purposes other than the purposes of physics or molecular biology or some other exact science […] is not describable in 'value-neutral' terms. Not without throwing away the most significant *facts* along with the 'value judgments' (Putnam 2003, 112).

In brief, "metaphysics without ethics is blind" (Putnam 1976, 92).

8 Conclusion

In closing, I would like to say that what I have always found remarkable in Putnam is not only the great breadth of his reflection—so rare, especially nowadays—, but also his constant preoccupation to link that reflection to the actual practice we are daily immersed in, with all its troubles and uncertainties, which shows, on the one hand, that he was taking the central question of philosophy to be the one with which it started, "how to live", and, on the other, that accepting "the world as we actually experience it" (the *Lebenswelt*) means regaining "our sense of mystery" (Putnam 1986, 118).

I therefore find it appropriate to address to him the very same words he addressed to a thinker he greatly admired—William James (cf. Putnam 1995, 23)—and say that

> if there is one overriding reason for being concerned with [Putnam's] thought, it is that he was a genius who was concerned with real hungers, and whose thought, whatever its shortcomings, provides substantial food for thought—and not just for thought, but for life.[4]

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