

Unended Quest

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The quest for truth never stops. This is Poppers dictum, hence the title of his autobiography. It is an autobiography thick on ideas but thin on gossip, and those readers who are looking for the salacious will be severely disappointed. Apart from his youth he offers very little of personal history¹, what matters are his philosophical ideas, and the work becomes, at times a somewhat priggish account of settling intellectual scores.

Popper is associated with the Vienna Circle of Carnap, an association he always denied and deplored. Carnap used to joke that the distance between him and Popper was very small, on the other hand the distance between Popper and him very large. The Vienna Circle, active on location in the 20's and early 30's, achieved fame and respect through its hardnosed study of what constitutes science. In this project it did not only involve academic philosophers and people in the humanities but also natural scientists in a truly cross-disciplinary venture, the like of which is seldom seen today. Poppers argument with the Vienna Circle was that it sought primarily to distinguish science from meta-physics, while Popper was more concerned with drawing a line of demarcation from pseudo-science. Metaphysics he argued, can be seen as proto-science, and nevertheless it can often serve a very useful function of providing a context and suggest fields of inquiry. After all, he argues, Darwins theory of evolution is after all a kind of metaphysics, which nevertheless has transformed the perspective of biology (and also fundamentally inspired Poppers own philosophy in ways to be seen below).

The philosophical point of departure for Popper is his rejection of induction. Here he acknowledges his debt to Hume², and argues that the infinite can never be covered by a finite number of cases. Just as there is no perfect translation between languages, absolute truth and infinite precision are never to be achieved, we will have to be content with approximations, whose accuracy depends on the situation at hand. But this does not mean that Popper, unlike postmodernists, denies the existence of truth, on the contrary. Popper is a realist, he believes firmly in a real world and truth as the ideal to which we all strive. But truth and real world as such can only be taken on faith. He has in other contexts described scientific knowledge as erected in a swamp into which we drive poles deeper and deeper, never to reach bedrock.

If there is one idea connected to Popper it is the notion of falsifiability. Theories and conjectures can never be proved only falsified. Thus we can never be assured about absolute truth, but only of a contingent one. But this is not the same, as pointed out above, as the idea that truth is relative and depending on a point of view, only an acknowledgment that our knowledge is never perfect.

¹ His wife remains a shadowy figure, and there is none on his remarriage in old age

² One may also argue that the notion of cause and effect has no absolute meaning, but are just features of theories

The idea of falsifiability, which naively can be thought of as tautological, just as Darwin's theory of selection, needs to be elaborated on, as there are some obvious objections that can be made.

First of all, the idea that a finite consideration cannot cover an infinite number of cases; or that on formal logical grounds a falsification always involves a verification, namely of the negation of the statement falsified. To be precise. A counterexample in mathematics is a very palpable falsification of a mathematical proposition. It is a finite statement, only involving a finite number of considerations: yet it has transcendental implications, namely that the statement in question can never be mathematically proved. No matter how ingenious and how extensive a purported proof is, we can say with confidence that it has to be wrong, without even bothering to read it. In fact we can state that any text, no matter how long, and thus of an infinite set, can never be a proof of the contradicted proposition, although it can of course have many other worthy consequences. This transcendental conclusion depends of course on an unprovable principle, namely that mathematics is free of contradictions. A principle without which mathematics would ultimately be a futile pursuit. A less sophisticated example is the fact that if you find your wife in your room, you can be sure that she is nowhere else, not on a planet of Sirius nor somewhere in a distant galaxy, without even bothering to look. Once again this simple discovery (of your wife in your room) has an infinite number of consequences (provided we believe that the universe is infinite) dependant upon the likewise unprovable principle that individuals, unlike say computer files, are unique and can only manifest themselves at unique locations.

More pertinent objections are that falsification itself is far from problematic as its interpretations rests on theories whose truth may be in doubt, or that a falsification can be made invalid through some ad hoc amendments of the theory. As to the latter Popper points out the irregularities of the orbit of the recently discovered Uranus. Uranus movements simply did not adhere to the laws of Newtonian mechanics, so was the latter invalid? As is well-known the assumption of an exterior planet solved the contradiction beautifully, and the verification of its existence was one of the triumphs of Newtonian Science. But most examples are not of this kind, but lead to infinite regresses.

We simply need to take a more pragmatic view of the notion of falsifiability, and in this context it might be instructive to look at its genesis. As a teenager Popper was very much enamoured by socialist ideas and was fascinated by Marxism to the point of once briefly joining the Communist Party. But he became progressively disenchanted by what he saw as the dogmatism of Marxist thinking, and aghast as one of its consequences, namely of confidently setting people to literally risk their life to corroborate some of its tenets. Popper decided, and this he describes as a pivotal decision in his life, that no creed had the authority to force other people to risk their lives. Listening to Einstein expounding on his beautiful theories and at the same time humbly admitting that if experiments would be in contradiction to them, he would have no choice but to abandon them, Popper was very much impressed. Was this not the anti-thesis of dogmatic thought, of which Marxism was such a pervasive example, which tolerates no dissent? Incidentally Popper throughout his life was true to the socialist ideals of his youth, namely that the best world is one of economic equality in which everyone is free to pursue their deeply felt interests. Yet he came to believe that there was an inherent conflict between the two values of freedom and

equality³ and when forced to choose, no matter how desirable the latter, he had to admit that freedom was more precious. Those ideas were developed in 'the Open Society and its Enemies' providing his most ambitious foray into political science, yet throughout his life he considered this as a sideline to his main interest - that of the philosophy of natural science.

The point of falsifiability is two-fold. On one hand it forces precision. A scientific theory that cannot be falsified does in a sense have no content, it does not say anything about the world, as the world does not impinge upon it. A primary example is of course psychoanalysis as it was practised by Freud and his school, and to which Popper had contact through Adler in his work on disadvantaged children. The unfalsifiable scientific theory perpetually evades censure being too slippery to be scrutinized. However, it is very important to keep in mind that falsifiability concerns only scientific endeavours, it becomes inappropriate in other concerns like art, literature and metaphysics (of which Poppers own theory is an example). If one ceases to regard Freuds theories (or Marxs for that matter) as scientific but as metaphysical or in the case of Freud as literature⁴ they can be quite valuable and inspirational. On the other hand it forces rejection, and allows a theory to be criticised from the outside. The practioners of a certain discipline cannot argue that outsiders are disqualified to criticise and that only experts can have a say in the matter of its correctness. Although this may hold true for certain internal question, any theory worth its salt has external consequences and common ground can always be found. To take an extreme example. The general public can understand little of the calculations and considerations that are involved in the making of an Atom Bomb, but it surely can appreciate one when exploded. The common ground here is very basic, involves no theories but those of our (common?) interpretations of sense data. Incidentally it illustrates the fact that the essence of falsifiability is not absolute, the rigours involved need only be agreed on before. After all we ascertain the truth of a fact depending on what is at stake. As Popper explains elsewhere, if someone asks him how many fingers he has on his left hand, he answers five, without bothering to take his hand out of his pocket: but would the life of a dear friend depend on the answer, he certainly would take it out and count them very carefully. Thus the possibility of falsifiability is an ultimate rejection of self-imposed authority.

The crucial aspect of falsifiability is the latter, because rejection forces development, in particular the closer and closer approximation to truth. There are just too many potential things in the world for them to be actualized, thus rejection makes possible a progressively deeper penetration into the phase-space of possibilities. As Thomas Kuhn remarks⁵, the reason why philosophy does not seem to have progressed since antiquity, in glaring contrast to the sciences, is that in philosophy nothing is really permanently rejected. Rejection has of course the unfortunate consequence of extreme specialization, but concomitant with this is depth. As has been pointed out each successive approximation of a 'true' scientific

³ This tallies well with the philosophy of Isiah Berlin that pointed out that the standard liberal values are in conflict with each other, and that it is not only pointless but dangerous to try to impose coherency

⁴ Harald Bloom in his recent book 'Genius' of one hundred exemplary minds includes Freud, not as a scientist, but as a master essayist.

⁵ In his well-known book on paradigms

theory involves increased content. It says more and more of reality and hence becomes more and more vulnerable to falsification⁶. The spirit of a scientific inquiry is not to seek corroboration, that is always easy to find, but to concentrate on its most vulnerable aspects. Thus the soundness of a theory, which is always provisional, depends on it having survived the most taxing tests (and it certainly helps to have opponents⁷). Popper has often been criticised for his rejection of induction and hence his refusal to take the fundamental findings of modern science as inviolable truths⁸. I find those accusations unfair, after all the point of Popper is to reject induction as a deductive tool, and his strategy of successive attempts at falsification is nothing but a pragmatic kind of induction. And honestly, how much of our private belief in the so called fundamental facts of science are not only social conventions, would we not quickly change our minds, were we told by authoritative scientists to do so?

The notion of falsifiability as a process of winnowing out and resultant feedback is very close to the philosophical ideas of Darwinism. As Popper declares elsewhere Life is Problem Solving. Theories are developed to solve problems, and they are tested by their solutions, just like organisms are faced with problems of survival in a hostile (or maybe rather totally indifferent) external world. Organisms (like theories) develop, not by Lamarckian instructions⁹, but by the responses to the problems they pose. Popper at an early age rejected questions of the type, what is? as meaningless. What is life? What is Art? What is the length of the circumference of a circle? Meaningful questions are only those that are stated in a specific context, and thus invariably in the nature of problems. To ask what is the length of a circle is meaningless unless you specify the context. If it is given in terms on how far it rolls in one revolution, it has a definite process of answering: if it is asked in a purely philosophical vein, no conclusive answer will ever be found. Basic to this philosophy is the notion of a real external world, impervious to our wishes, and to which we have no choice but adaptation.

Popper speaks about three worlds. World1 being the real world 'out there' whose existence has to be taken on faith, and whose acceptance is widely known as the 'realist' stand as opposed to the 'idealist'. It is in this world we are, whether we want it or not, and on the arena of which ultimately all tests of falsifications are being performed. This world1 interacts with our world2, namely of our inner lives, the lives of subjectivity and non-reproducible qualia. World3 is the creation of world2, it is the world of narratives, theories, and all other imaginative products of the human mind. While world2 cannot interact directly with world1, it can do so, mysteriously through the mediation of world3. The remarkable thing is that world3 although a production of our minds, yet is ultimately independent of it. As Popper suggests elsewhere, the integers are an invention of the human mind, as are its arithmetic operations, yet commutativity of say addition is an

⁶ In his book 'Der Logik der Forschung' he tries, rather pointlessly I think, to make the idea of content more quantitatively precise

⁷ If you want to have your arguments tested, you should never consult a friend, but a rival, whose overriding aim is to trip you, if he fails to do so, you can be reasonably assured

⁸ Among other Colin McGinn in a New York Review review on Popper in the fall of 2002

⁹ Once again the rejection of induction. The world does not tell us anything, it does not instruct, it only reacts, and it is up to us to interpret the reaction.

unintended effect. Theories always have unintended consequences, this is why they can never be definitely verified.

Popper although a lover of mathematics and music early in life came to accept that he did not have the necessary talent for either ¹⁰ instead he settled as a philosopher, after having made humble stints as a cabinet-maker and elementary school teacher¹¹. As a philosopher he has concentrated on a few but fundamental problems, although none with the same persuasive success as the one on falsifiability. On art he makes an instructive comparison between Bach and Beethoven, claiming that while the former was basically objective and suitable for emulation, the latter was subjective and hence best left alone. He takes exception to the romantic idea of expressing your emotions, claiming that a work of art obviously generates emotions, but those are intrinsic to the work itself, not to its creator, who it transcends. An artist is moved by his work, not ironically the other way around. An attitude which, in my opinion, has much that commends itself.

On other subjects the contributions of Popper are less impressive. His attempts to put probability on a firm footing, inspired by the frequency considerations of van der Miese, strikes me as amateurish; although, in my opinion, he has a point in lifting up the notion of random as genericity. ¹² He liked to consort with famous physicists, the prime examples being Schrödinger and Einstein. With the former he had personal if tense relations, with the latter audiences. His quarrell with Einstein that his Parmenidical theory of relativity did not distinguish the arrow of time, strikes me as very much besides the point. Einstein was not out to describe a total picture of the world, only giving a geometrical vision of gravitation¹³. Finally his thoughts on the mind-body problem seem completely unremarkable.

Popper ends on a very upbeat mode. This is indeed the best of all possible worlds, and modern western society in spite of (or because of?) its self-depreciation, supplies the individual with the best prospects of happiness ever provided in the history of mankind. Happiness lies in pursuing a vocation to the point of completely forgetting your conscious self. The book originally written in the seventies has been supplemented by a series of postscripts bringing things up to date, including the collapse of the Soviet Union. In the final postscript demanded by the publisher, Popper observes that he might have lived too long.

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¹⁰ It is sobering to reflect that Popper as a mathematician probably would have been as accomplished as most that nowadays, in a less exclusive society, pursue the subject in search of tenure

¹¹ The latter being sufficiently romantically considered at the time also to have attracted Wittgenstein

¹² What is a random sequence really? We are not necessarily impressed by the low probability of a coincidence, as a coincidence, but of independence as such. If a mathematical proposition is corroborated in a totally different context, we are deeply impressed, (even if the formal proof of it may be immaculate) without bothering to worry about a value of the probability

¹³ In relativity there is no time arrow, there is just a space-time manifold, existing in eternity so to speak. Incidentally the argument against time-travel collapses if there is no free will