Lines of Thought

Lines of Thought:
Rethinking Philosophical Assumptions

By

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Philosophy is perennial, but it is also ephemeral; it is continually being blurred and destroyed and transformed into something not itself, and so if we wish to philosophize, we are continually faced with the task of rediscovering and restoring philosophy.

—Thomas Prufer

F(a)nthological philosophy triumphs because elegantly structured possible worlds are so much more pleasant places to explore than the flesh and blood reality which surround us here on Earth.... A philosophical tradition that suffers from *horror mundi* in an endemic way is condemned to futility.

—Kevin Mulligan, Peter Simons, Barry Smith

Man muβ die Wichtigkeit nicht mit der Schwere verwechseln. Ein Erkenntnis kann schwehr sein, ohne wichtig zu sein, und ungekehrt. Schwehre entscheidet daher weder für noch auch wider den Wert und die Wichtigkeit eines Erkenntnisses. Diese beruhet sich auf der Gröβe oder Vielheit der Folgen.

[One should not confuse importance with difficulty. Knowledge can be difficult without being important and conversely. Hence, difficulty decides neither for nor against the value and importance of knowledge. The latter is based on the greatness or multiplicity of its consequences.]

—Immanuel Kant

An entire cloud of philosophy is condensed in a drop of grammar.

—Ludwig Wittgenstein

There is no refined quality of knowledge that can be obtained by the philosopher.

—Bertrand Russell

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ACKNOWLEDGMENTS

Although I have previously published most of the papers collected here, since their first appearance in print I have extensively revised and expanded them. Chapter 1, 'Philosophy as Proto-science', was first published in *Disputatio* (*Special Issue*), vol. IV, 2013. Chapter 2 first appeared in *Ratio*, vol. 24, 2011, under the title 'A Meta-Descriptivist Theory of Proper Names'. Chapter 5, 'A Perspectival Definition of Knowledge', was first published in *Ratio,* vol. 23, 2010. Chapter 6, 'The Skeptical Deal with our Concept of External Reality' first appeared in *Abstracta* (*Special Issue*), 5, 2009. Chapter 7, 'Free Will and the Soft Constraints of Reason', initially appeared in *Ratio,* vol. 18, 2006. Chapter 9, 'I Am Thinking', was also published in *Ratio,* vol. 14, 2001. I wish to thank the editors of these journals for graciously permitting me to reprint these papers here.

Although the greatest influence on my thought has been Wittgenstein's philosophical outlook, I am also indebted here to John R. Searle and Ernst Tugendhat, since I agree with much of what they say and I believe I have further developed some of their views. I also owe much to my former professors Guido Antônio de Almeida and Raul Landin, together with my former student colleagues Fernando Fleck and Fernando Rodrigues, particularly for their insistence on the relevance of the history of philosophy. Although modest, my knowledge of this area was invaluable in writing the papers of this book, helping not only to shape my approach, but also my response to some specific philosophical problems.

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INTRODUCTION

Philosophy can be as much a product of creative imagination as also of some dark insight into the true nature of things. There is not much of the former in this book, but hopefully more of the latter. As the subtitle suggests, most of these essays are attempts to revise philosophical assumptions or to replace them with others that I believe come closer to the truth. Below, I briefly comment on each paper.

Paper 1 defends the thesis that we can think of philosophy as a kind of anticipation of science. There are two main objections to this view: the first is that it is reductive, impoverishing philosophy; the second is that it is opposed to the commonly accepted notion that philosophy is an activity of analysing and ordering our conceptual structures.

The answer to the objection of reductionism is to reject reductive views of science, adopting instead a sufficiently wide and in effect commonsensical view of science as a kind of *consensualisable* critical inquiry (J. M. Ziman). In contrast to this, philosophical investigations appear as a kind of *non-consensualisable* critical inquiry that historically has often been replaced by a consensualisable critical inquiry – a scientific discipline. The exploration of this dynamic dichotomy constitutes the bulk of the paper.

We can answer the second objection, that viewing philosophy as a proto-science entails abandoning the analytical approach, by understanding conceptual analysis as an essentially methodological procedure. It arises from the inevitably conjectural and argumentative character of philosophy, which usually requires the kind of semantic-metalinguistic form of representation that W. V. Quine termed the *semantic ascent*. The upshot of this argument is that it is possible to regard philosophy (at least in part, as will be shown) as an anticipation of science, without abandoning the methodological procedures of conceptual analysis.

Paper 2 is in my view the main contribution to this collection, since I believe it persuasively challenges the current causal-historical orthodoxy regarding the mechanism of reference in applying proper names. What I propose is a new, stronger version of the cluster theory of proper names. The key to this new theory is a meta-identifying rule that we all tacitly know and that can in an evaluative way select and combine the descriptions belonging to the cluster of descriptions abbreviated by a proper name: if a proper name satisfies the conditions specified by the

rule, it has a reference – otherwise not. This proposal retains the main insights of the causal-historical view. Because of its derivation of what can be called *identification rules* for each proper name, we can not only formulate a more detailed reply to the counterexamples to descriptivism, but also explain the informative content of any proper name and why, in contrast to descriptions, they are rigid designators. In my view, this is the most convincing theory of reference for proper names currently at our disposal. Moreover, since a theory of proper names is the cornerstone of all theories of reference, if true, it could bring with it the seeds that could transform the present landscape of linguistic philosophy.

The aim of Paper 3 is to offer a new descriptivist analysis of the concept of 'water' that complements everyday descriptions of surface properties with new scientific deep descriptions of water's chemical structure. An adequate development of this approach allows us to reinterpret Putnam's Twin Earth fantasy in an internalist manner, as a projection of different cognitive-descriptive contents onto different kinds of things, tacitly using Oscar and Twin Oscar as mere referential devices. The concept of water is here restricted to a semantic-cognitive rule.

Paper 4 deals with John Perry's argument against the Fregean treatment of indexical utterances, showing that they cannot be translated into eternal sentences expressing Fregean thoughts. I show that it is possible to retain the sense of the indexical in an eternal sentence able to do the job of preserving the completing *sense* (the Fregean thought) of the former.

Papers 2, 3 and 4 share the same assumption, namely, that what we really need in order to explain mechanisms of reference is not an externalist view, but rather a much better developed formulation of the old internalist-descriptivist approach, based on sufficiently elaborated semantic-cognitive rules.

Paper 5 presents a revised formulation of the classical concept of knowledge as justified true belief. The thesis of this paper is that Gettier's problem is a regrettable consequence of neglecting the dialogical-perspectival dimension of our knowledge evaluations. The main reason for the long neglect of this perspectival dimension was a simplistic formal translation of the classical understanding of non-basic propositional knowledge as justified true belief. This translation conceals intuitions that should belong to an adequate elucidation of the classical insight, making possible misleading interpretations of the Gettierian type.

In contrast, when we make explicit the underlying assumptions in our view of knowledge as justified true belief, we arrive at a perspectival or dialogical-reflexive reconstruction of the standard definition that shows

the precise internal way in which the condition of justification must be related to the condition of truth in order to achieve new knowledge. This new definition should be preferred, because it neatly disposes of all the Gettierian counterexamples without gratuitously creating new difficulties. If epistemology can find the path of science in the broad sense of the word explicated in the first chapter, this could be a first step.

Paper 6 contains not only a new (and in my view entirely convincing) proof of the existence of the external world, but also what I believe to be the ultimate answer to the most influential sceptical argument since Descartes: the *argument from ignorance* (also called 'the *modus tollens* sceptical argument') concerning the existence of the external world. This argument is a refinement of the Cartesian proposition that if we cannot know that the external world is real, we cannot know anything about the outside world.

My refutation rests on an analysis of our concept of reality. It works by showing that there are two distinct attributions of reality implicitly made in the argument from ignorance: reality as something *inherent* (as the word is used in everyday life), and reality as something *adherent* (comparatively regarded with the help of sceptical scenarios or hypothetical artificial realities). I show that if stated in full, the argument begins with the disattribution of reality as something adherent and ends with the disattribution of reality as something inherent. This makes it clear that the argument from ignorance is at bottom equivocal and, consequently, fallacious. Moreover, a similar strategy can be employed to refute the converse of the argument from ignorance – the *argument from knowledge* – which attempts to prove that sceptical hypotheses about the existence and reality of the external world can be refuted. In this case, we can show that the attribution of reality as something inherent is treated as if it were an attribution of reality as something adherent, which also leads to equivocation and fallacy.

Paper 7 lays the foundations of a better compatibilist theory of free will. One main problem for compatibilism is that it lacks a satisfactory definition of free will. The classical compatibilist definitions of free will (as the absence of constraint) were intuitive but too narrow, while later 'hierarchical' definitions, if they were not somewhat arbitrary, were often *too* focused on certain kinds of freedom to the detriment of others. The definition of free will proposed here does not suffer from these shortcomings. It is not too narrow, because it is an extension of the traditional definition; nor is it arbitrary, because its categories mirror the causal structure of action. Resting on the causal theory of action, the new definition of free agency proposed here allows us to describe nearly all the

different kinds of freedom of agency with reference to their physical, volitional and rational origins. It enables us to identify supposed counterexamples in accordance with the kinds of restrictions on freedom they imply, which neutralises them in an intuitively convincing way. And it is potentially able to integrate hierarchical responses into its explanatory network.

Paper 8 develops a new compatibilist paraphrase of the idea that when we act freely *we know that we could have done otherwise*, as an alternative to G. E. Moore's well-known but unfortunate paraphrase. The basic idea is that when we say that we could have done otherwise, we mean something like, 'I would have chosen to do otherwise, if only certain internal conditions under the control of my will hadn't been the same'. This involves a difference that usually goes unnoticed, but makes all the difference in the world, since it appeals to a merely *possible* (and not actually available) alternative causal chain. This paraphrase enables us to give a straightforward compatibilist answer to consequence arguments like those of Peter Van Inwagen and also offers a new and unexpected answer to Harry Frankfurt's challenge to the principle of alternative possibilities.

The central idea of Paper 9 is that in order to be identified with mental types, neurophysiological types must be understood as sufficiently comprehensive *neurofunctional* structures within biological brains. If we understand neurophysiological types in this way, the multiple realisability objection to the identity theory of mind could be circumvented, at least when applied to *qualia*, which belong to the phenomenal mind.

Furthermore, I suggest that even if cognitive states, which typically belong to the cognitive mind, threaten to elude our argument, remaining multiply realisable, they would not preserve their semantic content if they were not semantically dependent on phenomenal states, for thoughts without intuitions are empty, as Kant rightly pointed out. This shows that the cognitive mind does not exist without its integration into the phenomenal mind, and, consequently, that even cognitive states must be realised in biological brains. As a consequence of this, a new strategy to solve the mind-body problem is foreshadowed. A final supplementary point is an answer to the objection that *qualia* are irreducible.

Paper 10 critically clarifies the question of the relationship between consciousness and reality. It begins with the consideration that consciousness is an evolutionary product whose function is to give the organism an image of how the things affecting it really are. In order to provide evidence for this thesis, I show that the need for access to reality plays a fundamental role in the evolution and constitution of what could be plausibly acknowledged as the three main forms of consciousness.

Moreover, these forms of consciousness are recognised as such because of their common property of showing things as they really are.

Finally, Paper 11 provides a pragmatic examination of what we might mean when we say or think, 'I am thinking'. This analysis shows that in a meaningful sense we cannot really say or think that we are thinking, without a possibility of error. The direct consequence of this for the Cartesian *cogito* is that only the 'I am, I exist' of the *Meditations* can (possibly) be understood as an indefeasible, self-verifying thought.

The papers collected here are analytical and systematic, wide in scope and sometimes conjectural, insisting on the extemporaneous aim of recognising the rightful status that common-sense and ordinary language insights are entitle to as the 'beginning of all, though not the end of all', to quote J. L. Austin. Due to the *prima facie* credibility of their points of departure (if we put aside their incompatibility with many ingenious but fanciful philosophical proposals), some of these papers also achieve a kind of synthetic dimension by organically relating plausible assumptions to one another in a constructive and comprehensive way. In this regard, I hope that they recall something of the old Continental Style of analytic philosophy.

Praia Bonita, 2013

CHAPTER ONE

PHILOSOPHY AS PROTO-SCIENCE

'Philosophie' könnte man auch das nennen, was vor *allem* neuen entdeckungen und Erfindungen möglich ist.
[One could also call 'philosophy' what is possible before *all* new discoveries and inventions.]
—Wittgenstein

Where philosophy was, there science shall be.
—Robert Nozick

My aim in this paper is to examine the structural and dynamic relationships between philosophy and science, particularly the view that philosophy anticipates and leads to science. My investigation sheds light on the nature of both philosophy and science.

Greek Origins of Occidental Philosophy as a Case Study

When seeking an explanation for the nature of philosophy, a good starting point is to inquire as to its origins. As we know, Occidental philosophy originated in Ancient Greece as an alternative to the mythological and religious answers that were then commonly given to questions that seemed to be relevant, but for which at the time no one could find a way to any kind of epistemologically justified answer. Instead of accepting the traditional fanciful stories about the foundations and origins of reality based on the anthropomorphic projections of mythology, early Greek philosophers decided that the world could also be explained speculatively. They thus appealed to impersonal (or nearly impersonal) *principles*, for example, water (Thales), air (Anaximenes), fire (Heraclitus), infinity (Anaximander) and being (Parmenides), or life forces like love and hate or strife (Empedocles).[1] Questions that could help us to understand the nature

[1] Similar principles have continually been proposed throughout the entire history of philosophy: Plato's *ideas*, Aristotle's *substance*, Plotinus' *Uno,* Aquinas' *God*,

of philosophy are in this case: What was the reason for this change in explanatory approach? What was the nature of this change?

A good explanation for the shift from mythological to philosophical thought has been proposed by historians of philosophy. According to W. K. C. Guthrie,[2] for example, Greek thinkers, having borrowed scientific knowledge (astronomical, physical, geometrical, arithmetical, etc.) from other cultures, were the first to consider such knowledge *in abstraction from* its *practical applications*, namely, in the form of *theoretical generalisations*. We find the best example of this outlook in Euclid's *Elements*, with its axiomatic-deductive method of proving theorems. It was this awareness of the explanatory power of theoretical generalisations that presumably suggested to early Greek thinkers the possibility that questions once answered with the anthropomorphic metaphors of mythology and religion could instead be addressed in terms of abstract speculative generalisations, that is, in philosophical terms.

Although persuasive, this last explanation remains incomplete. True, the Greeks were the first to consider scientific generalisations apart from their applications. They were the first to axiomatise geometry, and they were able to make physical generalisations and astronomical inferences (such as, respectively, Archimedes' measurement of specific gravity and Aristarchus' heliocentric hypothesis). Nevertheless, to explain the rise of philosophical thought it is not enough to consider the emergence of explicit generalisations independently of their practical applications, for this is not a privilege of scientific explanation. Common-sense explanations, for example, are also based on empirical generalisations, like those expressed by sentences such as, 'The sun rises everyday', 'Water quenches thirst', 'Fire burns'..., which are not scientific conclusions, but have always been accepted as obviously true. Moreover, people have certainly always been able to think about such commonplace generalisations apart from practical concerns.

A more complete explanation for the emergence of philosophy in ancient Greece seems to me to be the following. When they succeeded in creating abstract scientific knowledge, Greek thinkers, from Thales to Aristotle, also achieved an intuitive understanding of the nature of the generalisations and explanations of science, both of the *formal* sciences (geometrical theorems) and the *empirical* ones (physical and astronomical

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Kant's *noumena*, Fichte's *I,* Hegel's *Absolute*, Schopenhauer's *Will*, Heidegger's *Being* and Wittgenstein's *unsayable*, played a similar foundational role.

[2] See W. K. C., Guthrie, *A History of Greek Philosophy* (Cambridge: Cambridge University Press, 1962), Vol. 1, pp. 36 f.

laws). While they did not have an explicit philosophy of science from the start (the first steps in this direction were taken later by Aristotle in his *Organon*, mainly in the *Posterior Analytics*), they certainly did have an *idea* of the kind of hypothetical, predictive and explanatory procedures that in a broad way are shared by the sciences in general – both empirical and formal. Thus, they already had what we could call an *idea of science*. Now, it seems that Greek philosophy arose from the speculative application of this idea of science to questions that earlier were approached exclusively by means of religion and mythology, like the question of the ultimate nature of the world and of our place in it. Equipped with this new notion, early Greek philosophers attempted to proceed rationally, first by seeking to establish true generalisations based on certain kinds of *data* (empirical or formal), and then by trying to explain certain kinds of facts, whatever their nature, by applying these generalisations.[3] The first Greek philosophers pursued this aim by introducing vague principles (water, air, infinity, being) or forces (heat and cold, love and strife). These might be interpreted as the first attempts to replace explanations relying on the actions and intentions of divinities with explanations based on the constitutive elements of the real world and the impersonal laws regulating their transformations, often hovering midway between the two kinds of explanation.[4] It was by no means accidental that Thales, the first philosopher of the Occidental tradition, was also a natural scientist and a competent astronomer who once predicted a solar eclipse.[5]

Philosophy as Conjectural Inquiry Lacking Consensual Foundations

If we accept it as given that Occidental philosophy developed through the speculative application of the idea of science to questions inherited from

[3] A similar procedure is even used by philosophy understood as conceptual analysis: philosophers usually consider certain *data*, such as those found in examples, paradigmatic cases, thought-experiments, etc., in an effort to find conceptual generalisations adequate to explain a broad set of conceptual applications.

[4] This phenomenon was already identified by Auguste Comte, when he considered what he understood as the transition from mythological to metaphysical thought. For a discussion, see Claudio Costa, *The Philosophical Inquiry: Towards a Global Account* (Lanham, MD: University Press of America, 2002), chap. 4.

[5] According to Hegel, Oriental philosophy never distanced itself enough from religion; the reason could be that the Orient also never developed a sufficiently clear model of science and systematic scientific procedures.

mythology and religion, how can we then distinguish the activities of philosophers from those of scientists? Despite some suggestions to the contrary, there seem to be considerable differences between them.[6] The answer to this question brings us to what I regard as a central insight into the nature of philosophy. Even if philosophical methods generally resemble the practices of scientific inquiry, there is a fundamental difference between them, namely, that philosophical explanations remain *merely conjectural* and, to this extent, *speculative.*[7]

But what do the words 'conjectural' and 'speculative' mean when we say that philosophical investigation remains conjectural or speculative? One answer is that an investigation is conjectural if it produces only *hypothetical results*, and that this is the case when there is *no possibility of consensual agreement about the truth of these results.* Indeed, while it is rather easy to reach consensual agreement on results in the sciences, this kind of consensus is impossible in the murky waters of philosophical inquiry. Consider the difference: The Greek scientist Archimedes explained how levers work by precisely formulating the law of the lever, and his explanation could be empirically verified and agreed on by everyone. In contrast, the pre-Socratic philosopher Empedocles proposed to explain the creation and destruction of things in the world through the action of the forces of love (*eros)* and strife (*neíkos*) on the four elements (water, air, earth and fire), which was nothing more than vague, obscure speculation. He developed this theory in a mode and domain of inquiry where thinkers were unable to find a viable path to consensual agreement.

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[6] For a proposal to the contrary, see W. V. Quine, 'A Letter to Mr. Osterman', in C. J. Bontempo & S. J. Odell (eds.), *The Owl of Minerva* (New York: Free Press, 1975). Quine suggests that the boundaries between philosophy and science are arbitrary, like those between different jurisdictions demarcated on a map. If this were true, agreement about whether new ideas belong more to philosophy or to science would have to be achieved by establishing conventions. But this is not what actually happens in practice. Usually such agreements arise naturally and immediately.

[7] In some passages, Ludwig Wittgenstein defended the thesis that philosophy is not constituted by argumentative theoretical conjectures, but is rather a therapeutic activity of describing how language really works, in order to dissolve them as pseudo-problems. See Wittgenstein, *Philosophische Untersuchungen* (Frankfurt: Suhrkamp, 1983), sec. 109. However, as many critics have remarked, neither Wittgenstein nor his followers have come even remotely close to achieving this aim; for the obscurity and elusiveness of Wittgenstein's arguments do not transform them into descriptions. See A. J. Ayer, *Wittgenstein* (New York: Pelican Books, 1985), p. 137.

The conjectural character of philosophical thought – as the result of a lack of consensual agreement on fundamental matters – reveals itself to be an essential property able to explain its typically *argumentative* and *aporetic* character. For when thinking cannot be other than conjectural, there is no alternative except to embark on hypothetical reasoning: We begin by accepting certain non-consensual assumptions and then employ our best knowledge and skills in order to find all their implications. Then we change the assumptions (usually other philosophers do this) and proceed in a similar way. We subsequently try to critically compare the different results and the procedures that lead to them, in a process that can be endlessly repeated. In this way, philosophers are always beginning: they are always pondering new ideas in ways that usually generate aporetic argumentative discussion.

The conjectural character of philosophical inquiry also suggests an explanation for the lack of progress in philosophy: since philosophers cannot achieve agreement on the truth of their ideas, inter-theoretical comparisons must remain inconclusive. Thus, to give an example, scientists would generally agree that Einstein's relativistic mechanics is superior to Newtonian mechanics, since the explanatory power of the former is greater – this is a matter of scientific conclusions. On the other hand, philosophers have remained divided on alternative explanations of many important issues. Consider, for example, the disputes over the problem of universals, the mind-body problem, the free-will problem…).

Still, why can't we achieve consensual agreement on the results of the philosophical endeavour? The answer is that *consensual agreement about the results of an investigation is only possible when there is sufficient agreement about the main presuppositions underlying the investigation.* Previous agreement on these matters is always absent from philosophical inquiry. Philosophy lacks:

(*i*) Agreement about the *adequacy of its data, general principles and even problems* (philosophical 'data' and principles are uncertain, and there are philosophical questions, we suspect, which are pseudo-problems resulting from linguistic-conceptual confusion);

And it also lacks:

(*ii*) Agreement on the *adequacy of its methodological procedures for evaluating the truth of answers proposed for philosophical questions* (an argument or a set of arguments can appear conclusive to one philosopher, but unpersuasive to another).

In opposition to this, conditions (*i*) and (*ii*) are always sufficiently satisfied in the case of scientific research. Scientific problems and procedures are relatively uncontroversial, and the correct solutions, when finally found, can be publicly verified, if not with certainty, then at least with a high degree of probability. Indeed, where fundamental preconditions like these cannot be satisfied, there is no way to achieve consensual agreement concerning the truth (or probable truth) of the conclusions, which means that we cannot escape the aporetic discussions typical of philosophy.

Philosophy as Proto-Science

The foregoing discussion suggests that by investigating the similarities and contrasts between philosophy and science, we will be better able to explain some central features of philosophical inquiry. Moreover, they invite us to ask if our present philosophical inquiries will someday be absorbed into science when they achieve a degree of maturity that allows practitioners to reach consensual conclusions. In other words: Could philosophy be seen as a conjectural inquiry anticipating science – a *proto-science*? Could *all* philosophical inquiry be understood in this way?

We are not in the position to assert this. Still, an affirmative answer to this question is suggested by the historical fact that most of the sciences grew out of philosophical inquiry. Consider a few examples from several different scientific fields:

(i) According to Karl Popper, the now accepted astronomical understanding that the Earth is a large, round body moving in empty space, impelled by inertial and gravitational forces, was already anticipated by Anaximander (610-546/5 BC). This Greek philosopher proposed that the Earth was a stationary cylinder, not held in place by anything else, but floating unsupported in space because it is equally distant from everything in the universe and it would be impossible for it to move simultaneously in opposite directions.[8]

(ii) The scientific investigation of subatomic particles by contemporary physics has its forerunner in the speculative hypothesis of the atomistic philosophers, from Democritus to Epicurus, that visible things are formed by the aggregation of

[8] K. R. Popper, 'Back to the Pre-Socratics', in his *Conjectures and Refutations* (London: Routledge, 1962), p. 138.

extended invisible (because extremely small) but physically indivisible particles.

(iii) Biological theories of evolution seem to be dimly anticipated by Anaximander's insight that since man is helpless as a child he would have perished in primeval times if he were not descended from creatures very much like wild animals…The Platonic theory of the tripartite soul has its modern counterpart in Freud's structural theory of mind, which divides the mind into the *I* (*ich*), the *it* (*es*) and the *over-I* (*über-ich*) (commonly referred to as the *ego*, *id* and *super-ego*). It is true that psychoanalysis strongly resembles philosophy, insofar as its practitioners are still unable to reach consensual agreement on many issues, but it received from Freud's hands a relatively disciplined method to use as a form of investigation.

(iv) Wittgenstein's therapeutic conception of language as a nebula of language games working as unities of meaning anticipated the much more systematic (and narrower) theories of speech acts of J. L. Austin and J. R. Searle, which nowadays belongs more to linguistics than to philosophy.

These are only a few examples, and the developmental process is continuing. Many believe, for example, that once we really understand how the brain works, many of the riddles of our present philosophy of mind will yield to consensual (and in this sense scientific) solutions. All these facts lead us to ask whether science might not someday replace the remaining central philosophical fields, such as epistemology, metaphysics and ethics.

Nonetheless, there are philosophers who resist the notion of philosophy as proto-science. Echoing Wittgenstein, Anthony Kenny holds that philosophy, unlike science, deals with knowledge as a whole, since it aims to organise the already known, providing an *overview* of our knowledge. This kind of *comprehensiveness*, he argues, is absent in the particular sciences. Consequently, at least central areas of philosophy such as metaphysics, epistemology, the theory of meaning and ethics will forever remain philosophical.[9]

However, some overview and some degree of comprehensiveness can also be achieved by scientific inquiry. Why could a wider overview not be scientific? I suspect that the main reason for the resistance to this lies less

[9] Anthony Kenny, *Aquinas on Mind*, (London: Routledge, 1993), p. 9.

in the nature of things than in outdated positions on the nature of science that are still uncritically accepted by many philosophers. Indeed, these views, which have their roots in the philosophy of natural science developed by the positivists – and also in the main as reactions against them –, are often *too restrictive* to insure that our central philosophical interests will receive their deserved place in some future scientific inquiry. If applied, they would be reductive, impoverishing philosophy, if not stripping it of its core issues.

Consider, for example, Popper's conception of science as an inquiry that aims to construct theories that can resist falsification by decisive experiments.[10] This view is too restrictive, for it seems to exclude the theory of biological evolution from science, since the former is not decisively falsifiable: How would we conceive of an experiment capable of falsifying a hypothesis about an evolutionary process that occurred in the distant past? Given this problem, how could we ever apply a standard as restrictive as falsifiability (which arguably may be applicable to physics) to the central subject areas of philosophical inquiry, such as epistemology, metaphysics and ethics, other than in a crassly reductive or even eliminative way?

Indeed, if we accept such a view of science, our attempt to conceive of philosophy as proto-science would have to end here. The reason for this pessimistic conclusion is that when our view of the nature of science is strongly influenced by the study of a well-established particular science like physics, we are led almost perforce to reductive generalisations about the character of still unknown scientific areas. What we need is a concept of science so general and inclusive that it could be satisfied by any new approaches worthy to be called scientific, for it is credible to imagine that this would be precisely the concept of science that could properly be contrasted with that of philosophy.

The Right Contrasting View of Science

To arrive at this more balanced view of science, I propose that we should *not* adopt a model settled on by some already established science, but rather should rely on scientifically informed common sense. We must begin with questions such as: What does the scientific community as a whole understand as 'science'? How would scientists recognise any new theory or field of investigation as belonging to science? When considering these questions, the obvious answer that occurred to me was that science

[10] See K. R. Popper, *Conjectures and Refutations*, pp. 339-340.

should be systematically contrasted with philosophy in the sense that science is *not conjectural*: It achieves consensual agreement on its results because it has already achieved consensual agreement concerning basic issues such as data, general principles and methodological procedures.

Searching in the literature, I found that such a balanced view of science was already suggested by John Ziman, who understood science in general as 'consensualisable public knowledge', that is, as any kind of knowledge susceptible to consensual agreement about its truths.[11] According to this perspective, science is essentially constituted by generalisations that are – or at least are able to be – consensually accepted as true by the members of a scientific community.[12]

Ziman's notion of science is in complete accord with the picture most informed laymen and scientists have of science. When we talk about the progress of science, we are thinking of the acquisition of new knowledge that the community of specialists can or could evaluate with certainty and precision. This view of science is also sufficiently general and flexible to include *everything* we usually accept as belonging to the sciences, both the empirical and the formal. Moreover, placing the concept of consensual agreement at the centre of attention, this view of science seems to provide the ideal contrast between philosophy and science, since, as we have seen, the first is an inquiry identifiable by a *lack* of possible consensual agreement concerning its results. Accordingly, even if philosophy, as Kenny thought, should be a comprehensive inquiry aiming to achieve an overview, it could also be proto-scientific, insofar as we cannot rule out in advance the possibility that over time philosophical theories could become a sort of consensualisable and comprehensive public knowledge.

However, isn't the definition of science as 'consensualisable public knowledge' *too inclusive*? It might seem to be, because there are ideological circumstances in which 'consensus' is imposed from above, excluding the possibility of critical evaluation. Notorious examples of this are the roles played by political ideologies in defining legitimate science in Nazi Germany (outlawing non-Aryan science) and the Soviet Union (rejecting non-Marxist biology) and the Catholic Church when it declared

[11] This is the general thesis on the nature of science defended by J. M. Ziman in *Public Knowledge: An Essay Concerning the Social Dimension of Science* (New York: Cambridge University Press, 1968), chap. 2. See also H. L. Longino, *The Fate of Knowledge* (Princeton, NJ: Princeton University Press, 2002).

[12] I add the words 'are able to be' because there are many scientific hypotheses that we still do not know how to prove or disprove, although we have good reasons to believe that we will eventually be able to test them. Perhaps the best known example of this is superstring theory in physics.

geocentrism to be a doctrinal truth (and condemned Galileo as heretical). Yet, in accord with the above characterisation, such ideological impositions *do* seem to pertain to science, since a scientific community of ideas consensually accepted them. Thus, as presented, the proposed characterisation of science seems incapable of distinguishing science from an ideological by-product.

Nonetheless, we can regard this difficulty as only apparent, if we distinguish between *authentic* and *inauthentic* consensus, specifying what we understand as a community of ideas that is able to produce science in a way that excludes inauthentic consensus. Keeping the contrast with philosophy in mind, I suggest we call a community able to warrant authentic consensus a *critical community of ideas*, understanding it as a community that satisfies some *constitutive conditions* approximating those specified by Jürgen Habermas for what he calls an *ideal speech situation* (*ideale Sprachsituation*).[13] This means that we must define a critical community of ideas as something that satisfies constitutive conditions warranting the claim to authentic consensus. Without trying to be either systematic or exhaustive, I propose that we can generally characterise the main *constitutive conditions* for a critical community of ideas as requiring:

(a) *Commitment to seeking truth*: The members of the community should seek to find truth throughout the entire process of inquiry and evaluation of ideas.
(b) *Freedom of discussion*: There must be an equal opportunity for free critical discussion among the members of the community of ideas; they should not be subject to any intellectual constraints, except those of the best arguments.
(c) *Full access to information*: All members of the community must have full access to information and equal chances for the evaluation and exchange of ideas.
(d) *Shared competence*: All members must have suitable training in order to be able to make adequate evaluations regarding their fields of research.

Indeed, Nazi Germany's Aryan science and the Soviet Union's Marxist biology only prevailed because their scientific communities did not satisfy such conditions. A truly scientific consensus can only be produced by sufficiently satisfying constitutive conditions like these, which make

[13] See Jürgen Habermas, 'Wahrheitstheorien', in *Vorstudien und Ergänzungen zur Theorie des kommunikativen Handelns* (Frankfurt: Suhrkamp, 1984), pp. 174 f.

possible free and rational evaluations of the results of scientific investigation. When we evaluate reports of a new scientific discovery, we always at least assume that the scientific community has satisfied the conditions of commitment to seeking truth, free discussion, full access to information, and shared competence, if not in full, at least to a *sufficient* degree.

Another important objection that critics could make against such a consensus-based view of science is that it would be too dependent on social consensus, compromising its objectivity. It seems at first glance that science can be whatever the critical community of ideas decides to call science, arbitrarily disregarding objective criteria. However, this is not how science is defined in practice. For the critical community of ideas aims at achieving a *consensus about truth*, and as a matter of fact it is unable to achieve this aim in arbitrary ways like consulting crystal balls and similar superstitious practices. It is simply a matter of fact that a critical community of ideas must fulfil the appropriate objectivity conditions for a chosen epistemic domain if its aim is to achieve consensus about truth. In other words: Experience has shown that no community of ideas ever achieves an authentic consensus about truth *unless* it first meets some appropriate conditions for objective evaluative consensus. Indeed, without attempting to be either systematic or exhaustive, we can show that this is the case by making a list of conditions that must be sufficiently satisfied by any critical community of ideas able to reach an objective consensus about how to achieve truth. These conditions are what we could call *conditions of scientific objectivity*. Indeed, in order to achieve objective consensus there must at least be previous agreement about:

(i) what should be counted as the (empirical or formal) *basic data* and/or *general principles* of the epistemic domain to which certain scientific theories should be applied;
(ii) what can be accepted as *adequately formulated questions* to be asked concerning the epistemic domain (theories must answer meaningful questions);
(iii) what can be accepted as an *adequately constructed theory* in the epistemic domain (i.e., adequate in its internal, as well as in its external *coherence* within a wider conceptual framework);
(iv) what can be accepted as the *procedures of truth-evaluation* in a theory's epistemic domain (which should involve some kind of *correspondence* between a theory and the facts the theory is meant to explain, together with the accepted forms of *verification procedures* for finding this correspondence, etc.).

Such conditions of scientific objectivity are different for each scientific field. But they must be satisfied in order to assure the factual truth of scientific conclusions, and they coincide in many ways with the kinds of things that philosophers of science often investigate in depth with regard to their preferred scientific field. The difference is that these philosophers have too often considered only such conditions and their particularised ramifications, abstracting the social role of the critical community of ideas. To the contrary, we regard the satisfaction of such conditions as only an indispensable prerequisite for the successful scientific functioning of a critical community of ideas. As already noted, even if these conditions are not met *a priori*, the need for their satisfaction in order to achieve consensus on truth is an inescapable matter of fact, learned through experience by any community of ideas sincerely committed to the achievement of truth.

With the aid of these notions, we can improve Ziman's general characterisation of science as 'consensualisable public knowledge'. Here is our understanding of science:

> SCIENCE = a body of non-trivial generalisations reached by the members of a critical community of ideas (the community of scientists), these generalisations (sometimes seen as scientific laws) being (or being able to be) consensually held to be true by this community.

This is a better understanding of science. It is better in the sense that it is unbiased, according sufficiently with the view of science that everyone, from scientists to the educated public, generally holds. And it is also better, because it cannot be seen as reductionist or positivist: Any discipline that well-informed, objective evaluators deem a science should be compatible with this characterisation, for the first requirement of the scientific enterprise is the possibility of agreement on the truth-searching conditions of non-trivial generalisations shared by the members of a critical community of scientists.

The Right View of Philosophy Contrasted with Science

The above-outlined consensualist-but-objectivist view of science enables us to establish the correct relationship between science and philosophy. We can oppose the consensualisable public inquiry of science to the non-consensualisable conjectural inquiry of philosophy. In order to achieve this, we can characterise philosophy as follows:

> PHILOSOPHY = a conjectural body of non-trivial generalisations arrived at by the members of a critical community of ideas (the community of philosophers), without this community being able to reach any consensual agreement on the truth of these generalisations.

In accord with this characterisation, we can regard any conjectural inquiry in any domain of thought where it is impossible to achieve a consensual body of truths to be of a philosophical nature. Its philosophical nature results from its failure to satisfy the truth-seeking conditions that can make possible consensual agreement in the critical community of ideas. In short: philosophy lacks (i) agreement about its basic data and/or principles, (ii) agreement about the right questions to pose, (iii) agreement about the right form of its theories, and (iv) agreement about the right procedures for its truth-evaluation.

Indeed, in those difficult domains where science, understood as 'consensualisable public knowledge', clearly remains impossible, only the conjectural inquiry of philosophy is available. In this way, we can explain why philosophy, in conformity with the etymology of the word, is the *love* (*philo*) of knowledge or wisdom (*sophia*) and not the attainment of knowledge (*scientia*). In the words of Bertrand Russell: 'Science is what we know; philosophy is what we don't know'… 'Science is what we can prove to be true; philosophy is what we can't prove to be false'.[14] Indeed, when philosophy achieves consensual truth, it ceases to be philosophy and becomes science. Even the meta-philosophical understanding I outline in this paper could be accepted as belonging to science, if the critical community of ideas were able to achieve authentic consensus on its truth.[15]

Another point that we should note is that the practice of philosophy always presupposes a critical community of ideas, even if in some cases (like those of Vico, Peirce and Nietzsche) in a counterfactual sense. A well-known criticism of medieval philosophy is that by accepting Christian dogmatism as above criticism, it fell short of satisfying this condition.

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[14] Quotes taken from Allan Wood's postscript to Bertrand Russell's *My Philosophical Development* (London: Routledge, 2004).

[15] One could also object that the proposed characterisation is overly inclusive: There are some theories, e.g., Freudian psychoanalysis and Marxian dialectical materialism, which are not considered to be typically philosophical, even though they lack consensual agreement about their results. I think that the problem here is in part just one of nomenclature, for Freudianism and Marxism are in fact quite philosophical.

Finally, one could object that as a typically 'higher-order' form of investigation, by its very nature philosophical inquiry is not subject to objective verification and, consequently, to the kind of objectively grounded consensus achieved by science. Our response is that this argument may well be overly pessimistic. The main reason to think so is that support for much theoretical work is not just directly empirical – through observational verification – but also *inter-theoretical*. We can often find this kind of support in the sciences. Take as an example the Darwinian theory of evolution. Darwin and his contemporaries developed their ideas without recourse to genetics, since Mendel's work on the foundations of genetics was unknown to early evolutionary theorists. Nevertheless, the subsequent rediscovery of genetic theory by the scientific community provided extremely important inter-theoretical support for evolutionary theory. Something similar can also occur within 'higher-order' philosophical inquiry.

It was once figuratively suggested that the problems of philosophy are so intertwined that any one problem can only be solved when all the other problems have already been solved (Wittgenstein). Far from being pessimistic, this thesis points to inter-theoretical support. Insofar as related fields of knowledge move toward science, this provides new inter-theoretical support for philosophical insights, paving the way for consensual scientific knowledge.

Proto-Scientific *versus* Analytic-Conceptual Views

Once we accept these proposals, we see that the supposedly essential differences in subject matter or even in methods between philosophy and science are illusory. Take, for example, the still widely believed conception according to which philosophy is a non-empirical, higher-order activity of *conceptual analysis* (its method) intended *to make explicit the structure of our most central concepts and the relations between them* (its subject matter). This view or something similar arose due to the prominence of the philosophy of language in the first half of the Twentieth Century.[16] In the second half of the Twentieth Century, however, the

[16] The persistence of this view is underlined by the essays of Robert Brandom, Barry Stroud, Allen Wood and Karl-Otto Apel, published by C. P. Ragland & S. Reidt in *What is Philosophy?* (New Haven: Yale University Press, 2001). For standard presentations of similar views, see Michael Dummett, 'Can Analytical Philosophy be Systematic and Ought it to Be?' in his *Truth and Other Enigmas* (London: Duckworth, 1978), and Ernst Tugendhat 'Überlegungen über die