THE PROBLEM OF THE JUSTIFICATION OF A THEORY OF KNOWLEDGE

Part II: Morphology and Diagnosis

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SUMMARY. The article analyses the meta-epistemological problem of the justification of a theory of knowledge. The first section is dedicated to the morphological reconstruction of the problem, the second presents a diagnosis of the problem in terms of a metatheoretical and logically non-contradictory *petitio principii* and the third delineates the limits within which strategies for the treatment of the problem could be elaborated.

Key words: Indirect Solution, Justification, Meta-epistemological, *Petitio Principii*, Theoretical Level, Transcendental.

> "Se vogliamo che tutto rimanga com'è bisogna che tutto cambi"
>
> Tomasi di Lampedusa, *Il Gattopardo*

1. INTRODUCTION

1. In recent times there has been a revival of interest in the classic problem of the foundation of a theory of knowledge.[1] In another work[2] I have offered a reconstruction of the historical metamorphoses undergone by the formulation of the issue. My conclusion was that the problem has three complex roots in the history of epistemology: (a) the contemporary debate within the German tradition (e.g., about Albert's "Münchhausen-Trilemma") can be traced to its Kantian origins through the neo-Kantian and Popper's discussion of "Fries' trilemma";[3] (b) that within the English tradition to its Cartesian origin through the discussion of the "Cartesian circle";[4] and (c) both traditions can be connected with Sextus Empiricus' "problem of the criterion".[5] To such an historical exploration of the problem I now wish to add a morphological examination. This paper is complementary to the historical one in the sense that scholarly and logical investigations have been mutually influential. In order to study the different *variationes* of the problem, I have been forced to focus more carefully on its morphological structure, and the logical analysis of the latter has been enriched by the various historical cases that have been taken into consideration in the scholarly context. I have chosen to separate the work in two papers for, on the one hand, heuristic, economical and expositive reasons, and because, on the other, my previous paper was meant to be a contribution to the history of the formulations of the issue, while the

present essay seeks to provide a critical assessment of the solutions that have been or could be put forward in the course of the historical transformations of the issue.

2. Before I begin the discussion of the issue, I shall make explicit a few basic points concerning the purely logical and often visual approach informing the rest of the article.

Paul Woodruff has written that to the question "Which came first, the sceptic or the epistemologist? The answer is 'Neither: Plato came first'."[6] He developed his answer by recalling that "much of modern epistemology has tried to answer scepticism, and this tempts us to think of epistemology as second in order of thought and of history," and that this would be a largely inappropriate view, since scepticism emerges historically only after Aristotle, as an answer to dogmatic philosophies, Stoicism included. As Woodruf adds, his remarks intend to specify that, in Plato's early dialogues, Socrates supplies both the dogmatic content and the critical arguments, giving rise to an interplay which is not yet that between the sceptic and the epistemologist. From a historical point of view Woodruf is obviously right. "Scepticism" came after Plato's and Aristotle's theories of knowledge, therefore epistemology is not always third in order of history, and hence it may not necessarily be third in order of thought. However, precisely because I shall not base my considerations upon a historical development, I intend to present epistemological theories as a third-order reply to second-order sceptical doubts concerning first-order, *prima facie* instances of knowledge, and therefore the *diallelus* as a fourth-order challenge concerning the theories of knowledge. I shall turn to the discussion of the theoretical reasons in favour of such an organization below (see [18]/[21]). At the moment, it can already be pointed out that epistemology is third in order of logical reconstruction if by the first-order we understand what we acritically believe are instances of knowledge, and if we disentangle, within the sceptical challenge, two different attacks, the one against knowledge and the one against the possibility of having a theory about knowledge. Once we draw such a distinction then uncertainties resulting from actual mistakes, critical doubts, Socratic questions, sophistic arguments or sceptical challenges can all be merged into one single level, for they will concern the nature of knowledge. They constitute a second-stage battery of doubts and puzzles about the outcome of our cognitive abilities that for the sake of simplicity can be labelled "sceptical". Without such obscurities or incertitudes there would be no questions on the nature of knowledge and therefore no epistemological attempts of systematic answers. The third level will then be represented by the epistemological reflection, whereas at the fourth stage we shall encounter the other sceptical challenge, namely the attack against the possibility of a theory of knowledge.

Besides making explicit the replacement of a historical succession with a logical sequence, I shall also depict the various logical sequences in terms

of semi-visual or semi-spatial patterns, whenever this is appropriate (see for example [13] and [15]). This is coherent with the use of the topographic analogies that I have adopted in the historical essay (the various territories, the paths, and so on). I shall build nothing theoretically crucial on such a way of presenting the issues. I do believe, however, that one understands something better if one can conceive of it in a visual representation. It is therefore only a matter of maximizing clarity, and I hope that the essay will benefit from such an approach.

2. THE MORPHOLOGY OF THE PROBLEM

3. The dialectic of expressions of knowledge, sceptical doubts and episte-mological responses starts from the recognition of a common ground. Both the epistemologist and the sceptic accept that there are human beliefs, judgements, statements or even propositions which men claim to be actually, i.e. not only logically or potentially, knowledge-bearers. As such they would be true (normally in the general sense of being adequate, faithful or reliable) descriptions of the intrinsic nature of the external, physical world. The characterization of this "common ground" requires four specifications. Firstly, for the moment we shall disregard the fact that there are also beliefs, judgements, statements or propositions about the internal, mental world, which men claim to be equally if not even more certain (see [28]). Secondly, one may doubt the historical appropriateness of the dichotomy "external vs. internal world". According to Miles Burnyeat what is nowadays a basic and common distinction was unknown to Sextus Empiricus and has its origins in the seventeenth-century sceptical Renaissance, when Gassendi, among others, aligned Sextus' distinction between the apparent and the real nature of the world with the contrast between "the outside things (what is accessible to everyday observation through the senses) and their inner nature, where [...] the inner/outer contrast bespeaks of a new world, in which the interpretation of ancient Pyrrhonism has been overlaid with the preoccupation of seventeenth-century science's use of the dichotomy."[7] However, for the sake of simplicity I shall endorse Gassendi's alignment and disregard the historical difference. Thirdly, one may question the use of four different terms, such as "beliefs", "judgements", "statements" and "propositions" in order to identify the members of the family of "knowledge-bearers". By their use I mean to indicate that henceforth I shall draw no distinction between modern analyses of knowledge in terms of pre- or a-linguistic knowledge-bearers (the Cartesian beliefs or the Kantian judge-ments), contemporary analyses which adopt linguistic interpretations of knowledge in terms of statements, propositions or justified true beliefs, and more Platonistic interpretations of the knowledge-bearers as propo-sitions. Finally, for the sake of consistency one may wish to specify that the sceptic concedes to the epistemologist only that they both believe that there are other beliefs,[8] not that they know that there are ones. The point,

however, does not need to be over-emphasized here. Having specified all this we can now turn to the construction of our set of knowledge-bearers.

4. In his 'Author's reply to the Seventh Set of Objections',[9] Descartes hints at the possibility of constructing such a common ground extensionally. He compares beliefs to apples in a bucket, and the task of an epistemology to that of selecting the good from the bad ones, that is beliefs that are in fact knowledge-bearers from "merely doxastic" beliefs. In order to construct our model we can follow Descartes' suggestion and agree about the following approximations:

(D_1) beliefs, judgements, statements and propositions $=_{def.}$ (dispositional) linguistico-doxastic phenomena (P);

(D_2) a P which may assert something about the nature, i.e. the properties and the existence,[10] of external reality W (i.e. persons, things, events, facts etc.) even if only elliptically $=_{def.}$ potential knowledge-bearer (kb); and

(D_3) a kb that enjoys an epistemic relation (R_e) with W such that it conveys true information about W $=_{def.}$ an instance of knowledge (K).

Obviously, D_1, D_2 and D_3 do not aim at giving an exhaustive definition of knowledge. They lack, for example, any reference to the notion of correspondence between K and W, or to the requirement of a certain coherence among the body of Ks. The ordinary suggestion that some sort of justification should play a role in establishing whether a P is a K (e.g. I know that q iff I have some good reasons to believe that q or to believe that $-q$ is false) is also not taken into account. Thus, the previous definitions are far from meeting even the necessary requirements settled by a Gettier-type analysis in terms of true and justified beliefs. However, this is not a serious problem. Our present goal is that of introducing a clear and explicit formulation of what we ordinarily take to be a minimal, necessary condition which, for example, an empirical belief should satisfy in order to count as an instance of knowledge, namely that it is a true description of some furniture or state of the universe. The notion of truth to be adopted is a question that can be left unanswered and the reference to the role of justification of the *kb* can also be put on one side because it is going to reappear in all its disruptive force at the metatheoretical level of the justification of the premisses of a theory of knowledge which adopts D_1/D_3. All D_1/D_3 have to be fitting for is to provide a common, minimal basis for the debate between the sceptic and the epistemologist.

5. Let us now characterize the linguistico-doxastic phenomena which aspire to the status of instances of knowledge and whose historical occurrence is accepted both by the sceptic and by the epistemologist thus:

(D_4) a P aspiring to the status of K $=_{def.}$ $?p^k$.

The question mark before p^k represents what Husserl calls the *Index der Fraglichkeit*[11] ("index of questionability"): any of our potential knowledge-bearers, even the most certain, is put in doubt and those which appear

most acceptable are located in the set of aspirants to the title of knowledge. Such a set of $?p^k$ represents Descartes' bucket, that is S_d, a first level (L^1) extension of candidates for the role of instances of knowledge. Both the sceptic and the epistemologist further agree on working on a S_d which is large enough as to eliminate the possibility that any eventual problem concerning the recognition of one or more $?ps^k$ as Ks could result from the limited extension of S_d.

6. The sceptic casts powerful doubts on the possibility of removing the "index of questionability" from $?p^k$. He may not dissent on the fact that there occur $?ps^k$ (I shall imagine Sextus Empiricus would have been ready to accept even propositions), but he will certainly disagree on their capacity to amount to instances of knowledge which catch the real nature of the external world (*upokeimena*).[12] Aenesidemus' ten tropes and Agrippa's first and third trope resound throughout the history of philosophy and have contributed to shape the tradition of epistemological studies. They consist of doubts about the epistemic validity of such epistemic claims in terms of their fallibility or relativity. Similar challenges concerning the epistemic status of members of S_d rank above the first level of S_d itself. I shall therefore call them objections^{L2}.

7. A substantial amount of energies of any theory of knowledge is dedicated to the attempt to answer various, more or less refined versions of objections^{L2}. Although any theory of knowledge may be ready to recognize that membership in the set of instances of knowledge cannot always be easy to establish, on the other hand, it will also maintain that objections^{L2} about the nature of each member[13] of S_d are unjustified, because:
    (TK) there is at least one criterion C which enables us to discriminate an extension of S_d such that every $?p^k$ in $\{?p^k{}_1, ?p^k{}_2,..., ?p^k{}_n \}$ (for $n \geq 1$) satisfies the formula $R_e(?p^k, W)$. $\{?p^k{}_1, ?p^k{}_2,..., ?p^k{}_n\}$ will constitute the subset S_K of instances of knowledge.

8. According to different theories of knowledge, such a criterion may correspond either to:
    (C_1) one or more exemplary specimens of knowledge; in this case we could speak more precisely of C as being in itself a standard or parameter of knowledge; or to
    (C_2) a statement of one or more properties; these are often interpreted relationally and according either to various types of knowledge (*a priori*, empirically testable, etc.) or to the derivation of $?ps^k$ from certain reliable sources of knowledge like perception, memory or intuition. The term "sources" is more adapt here than the expression "belief forming mechanisms/processes" in order to leave unspecified whether cases like God's revelation could count as a "reliable way of acquiring knowledge."
    In the case of C_1, for every member $?p^k$ of S_d, if $?p^k$ is in a satisfactory

relation to C_1 – for example, a logical relation of formal deduction or, less strictly, of abductive/probabilistic inference from C_1, or even some weaker, epistemological notion of similarity – then $?p^k$ is also a member of S_K. But C_1 can be more easily constructed according to C_2. In this case, in order to become a member of S_K it is sufficient for a $?p^k$ to satisfy certain relational requisites stated by C_2. For example, having the property of being clear and distinct or that of having been reached by means of an empirically testable process may count as satisfactory tests for the elimination of the index of questionability. Ideally, the two sets obtainable from the application of C_1 and of C_2 are co-extensive. Certainly, it is always possible either to construct C_2 on the basis of C_1 – given some standard specimens of knowledge we extract some relational parameters according to which we proceed in the selection of other members of S_d – or to justify C_1 by means of C_2: a specimen of knowledge is exemplary because it satisfies certain relational properties specified by C_2.

9. As an answer to objections[L2], TK introduces a third-level (L^3) into the debate between the sceptic and the epistemologist. By challenging this attempt to justify our knowledge we finally arrive at the metatheoretical objection moved against the status of the fundamental premises of a theory of knowledge itself. On this fourth level (L^4) the sceptic argues that in fact TK begs the question (cf. Agrippa's second, fourth and fifth tropes).

10. The sceptical challenge concerns the status of C and can be summarized as following. For the sake of economy let us assume that a TK elaborated in order to solve objections[L2] consists only of a finite conjunction of statements 'S_1 & S_2, & ... S_x' (for $x \geq 2$), and that for at least one $?p^k$ in S_d, TK includes the claim, at S_x, to the effect that the theory is able to justify the elimination of the *index of questionability* from $?p^k$ and thus to determine its assignation to S_K on the basis of 'S_1 & S_2, & ... S_{x-1}'. The set "S_1 & S_2, & ... S_{x-1}" works as the large premiss that warrants the validity of the final identity statement ($?p^k = K$). If we eliminate from 'S_1 & S_2, & ... S_{x-1}' whatever is not strictly relevant to the assignation of $?p^k$ to S_K, we have the result that the restricted premiss incorporates C (if C is elaborated in terms of C_2) or is identical to C (if C is elaborated in terms of C_1). Still for the sake of simplicity, let us also assume that the more restricted premiss-conjunct is constituted only by a complex statement $\{S_c\}$ and that $\{S_c\}$ represents (i.e. is either identical or incorporates) C_1 and/or C_2. $\{S_c\}$ is the essential, first premiss which enables the epistemologist to establish the membership of $?p^k$ in S_K.

11. The sceptical objection[L4] hinges on the doubtful justificatory status of $\{S_c\}$, and can be articulated in the following passages:
(1) suppose that according to C_1, $\{S_c\}$ is already an exemplary specimen of knowledge: then the theory is committing a *petitio principii*. In order

to show that for at least one member $?p^k$ of S_d it is true that $?p^k$ is in a relation R_e to W and therefore that '$?p^k$ = K' the theory is already assuming that '$\{S_c\}$ = K', and so it is begging the question. Both the sceptic and the epistemologist agree that the development of a theory of knowledge starts from the assumption that an investigation about the nature of knowledge is urged by the emergence of considerable problems concerning the status of our linguistico-doxastic phenomena. In other words, when we pass from L^2 to L^3 our state is one of potential ignorance about what could count as an instance of knowledge. We do not know yet whether any $?p^k$ is in a relation R_e to W, but we are confident that we will be able to produce a theory such that it will become possible to estimate whether, and if so how many $?ps^k$ are Ks. When we pass from L^2 to L^3, S_K is empty and we are looking for an *instrumentum iudicandi* whereby we may decide whether at least one member can be assigned to it.[14] But by assuming '$\{S_c\}$ = K' we solve the problem only by committing a fallacy;

(2) suppose now that, according to C_2, $\{S_c\}$ states a relational condition such that, if $?p^k$ satisfies it then it counts as a K. In spite of the fact that the assumption of C_2 is a less obvious *petitio principii* – and this because of the fact that $\{S_c\}$ includes an appeal to and it is not simply an instance of knowledge – the sceptic will still argue that either

(2.a) $\{S_c\}$ has been obtained by means of an inductive abstraction on other members of S_K, and therefore we are caught in the same *petitio principii* as in (1); or

(2.b) $\{S_c\}$ is assumed as being in itself an instance of knowledge, but then:

(2.b.i) in order to justify its assumption we refer to some other member of S_K and so we are back to the same *petitio principii* as in (2.a); or

(2.b.ii) in order to justify its assumption we refer to another $?p^k{}_n$ or to another criterion C_n which in turn requires a justification either from another $?p^k{}_m$ or from another criterion C_m and so on, and in this way either we are caught in a *regressus ad infinitum* or at a certain point we are back to a *petitio principii*; or

(2.b.iii) in order to delay the justification of its assumption we accept it as "probationary" until the whole theory of knowledge is formulated and then we prove that its assumption is justified on the basis of the theory, but in this way too, we are caught in a *circulus in probando* given the fact that the internal consistency of a fully developed theory of knowledge is a necessary but not a sufficient condition to warrant the truthfulness of its first premises. A perfectly coherent theory of knowledge could still be totally wrong as far as its conclusions about the nature of knowledge are concerned.

According to the sceptic, in all these cases the adoption of $\{S_c\}$ is unjustified. The only other alternative which seems to be left open is the mere assumption of $\{S_c\}$, but this, without the possibility of providing a satisfactory justification, amounts to a completely arbitrary option.

I shall call this further attack on the possibility of a theory of knowledge objection[L4].

12. To many people objection[L4] might not seem an unsolvable problem and although things could easily be adapted to more complex cases – so that, for example, the outcome would not be different if we were to speak of "reasonableness of the acceptance of a belief" instead of "justification of the acceptance of a belief" for in this as in other cases the same alternatives could be rephrased according to different standards of epistemic appraisal – in principle I am inclined to agree with such an optimistic outlook. What I am claiming here is that the previous analysis is an adequate presentation of the sceptical challenge, that *prima facie* the sceptic seems to be able to make a powerful case against the value of any theory of knowledge and that any theory of knowledge worthy of its name should be able to provide the basis for a satisfactory answer to such an attack, at least implicitly. Since any possible solution to the problem and our own capacity to assess its success will depend on a good grasp of the nature of the problem itself, the time has come to focus on the logical and metatheoretic features of objection[L4].

3. THE DIAGNOSIS OF THE PROBLEM

13. As Sextus Empiricus rightly assumed,[15] the most important difficulty inherent in the justification of the premisses of a theory of knowledge is that of the fallacy of *petitio principii*. The other two problems, the infinite regress and the accusation of unjustified assumption, should be interpreted as supporting arguments whereby the sceptic prevents our evading from the most fundamental difficulty. That the *petitio principii* is a more fundamental problem than that of the *regressus* is not simply due to a contingent organization of the priority of the arguments, but to the logic of the notion of justification itself. When we start developing a theory of knowledge we are supposed to search for the most justified conjunction of premisses from where an analysis of our knowledge-bearers can be developed. Once reached, such premisses cannot be further grounded. Their degree of justification cannot be increased by hypothesis, for if it could be then this would not be the set of premisses from which our analysis began. It follows that no matter how many other premisses we may adopt to justify the initial set, still *ex hypothesis* these further premisses will rank on the same justificatory level. As it has been often made clear from Aristotle to Wittgenstein, accumulation of statements will not result in an increment of acceptability if what we are doubting are the most certain of our beliefs. We may have a formal regress of an infinite number of statements, but the possibility of improving the intensity of the convincing power of our premisses soon reaches an end. It is the futility of this qualitative escalation, as it were, which is stressed by Wittgenstein when he says: "My having

two hands is, in normal circumstances, as certain as anything that I could produce in evidence for it. That is why I am not in a position to take the sight of my hand as evidence for it" and then, "'I know this is a hand' – And what is a hand? – 'Well, *this*, for example'" (*On Certainty*, 250, 268). As a consequence, although we may believe that the acceptance of the sceptical challenge forces us to succumb to an infinite regress or to step into a mere assumption, the most fundamental threat turns out to be the fact that the regress itself develops within the closed field of our rational capacities. At a certain point asking for further justification becomes fruitless because there is a limit to the degree of certainty we can appeal to. If the value of acceptability of the initial set of premises is challenged but cannot be increased this means that we have reached the place where reason, if further consulted, can only restate itself. By means of the *diallelus* (objection^{L4}) the sceptic tends to cause an escalation of justification which ends in a sort of logical implosion. Sooner or later the infinite sequence of justifications ends by losing any real effect because it is bound to represent a mere repetion of statements whose degree of acceptability is already in question. Sellars has written that "in characterizing an episode or a state as that of knowing, we are not giving an empirical description of that episode or state; we are placing it in the logical space of reasons of justifying and being able to justify what one says."[16] Enlarging on the metaphor we may say that the "Sellarsian logical space of justification" is not Euclidean but spherical: the sceptic argues that in the long run the search for justification for our premises cannot escape a circular appeal to the same, inevitable but already challenged standards of rational acceptability.

14. According to the *dependency conception*,[17] a *petitio principii* is reducible to an argument where some premiss *p* depends, more or less in the long run, on the possibility of maintaining the conclusion *q*, i.e. to an argument where one cannot *know* that *p* is true without *knowing* that *q* is true: "one may know the truth of *q*, as a matter of fact, but one must have some *other* means of knowing the truth of p – that is, some means independent of *q*."[18] If we apply this diagnosis to the morphology of our problem, it seems that the *petitio principii*, in which the justification of TK is essentially caught when it tries to solve objections^{L2}, is not a fallacy of *formulation*, but rather one of *contents*.[19] The process is fallacious because it fails to present an effective solution to objections^{L2}, not because it fails to be sound. Given this interpretation of the nature of the problem, the sceptic can conclude that, since it represents a circular argument in favour of the epistemic value of certain $?ps^k$, any TK "systematically lacks the power to escalate the credence of its conclusion for those to whom it is directed"[20] in our case the sceptic himself.[21] The point deserves attention because it is not unusual to find epistemologists who regard either the sceptical request (for a final justification of our premises) or the *petitio principii* itself (in which the epistemology can be caught) as a logical fault or even a self-contradiction.[22]

15. On the basis of the previous analysis, the image we may now adopt to describe the problem is that of a *vicious spiral*[23] constituted by the levels L^1/L^4 through which we enter into a loop. We have seen in what sense objection[L4] forces us to understand the top of the spiral as either bent down to the basic level of S_d (*petitio principii* or *circulus in probando*), never ending (*regressus and infinitum*) or arbitrarily cut off. The image of the spiral is useful to convey both the sense of a hierarchy of levels of discussion and that of a strengthening of the sceptical questioning. The conclusion of this spiral of arguments is that if S_K is assumed to be empty at the beginning of the investigation it is very difficult to see how it can be "filled" with instances of knowledge without begging the question of the justification of this procedure.

16. So far I have been talking about levels of discourse and in so doing I have implicitly endorsed the hypothesis that the charge of circularity is a metatheoretic problem concerning a theory of knowledge and the justification of its fundamental premisses, that is L^3. I mean now to make the point explicit and contend that the foundationalist problem does not immediately concern the primary level of the linguistico-doxastic activities of a knowing subject and their consequent findings, scientific knowledge included. This further step requires a previous specification.

17. So far I have also simplified the matter by implicitly adopting the dichotomy "knowledge vs. theory of knowledge" that is "linguistico-doxastic phenomena at L^1 vs. epistemology at L^3". In this way I have left the problem of the collocation of science within the sceptical spiral untouched. Now in order to understand below (see [18]/[21]) the similarities between William Alston's and Karl Popper's interpretations of the meta-epistemological problem it is necessary to define the knowing subject KS who is responsible for the formulation of the various candidates to the role of instances of knowledge. If we want to be able to understand sciences also as instances of knowledge, no matter how complex, to be included in L^1 we may take "KS" as standing either for:
(a) a *historically determined* human knowing subject (HKS), say one of us, or an *arbitrarily chosen* HKS, so that we may disregard individual idiosyncrasies; or
(b) an *abstract knower* (AK) such that for any instance of knowledge K identified as such at time t_x it is always possible to conjecture the presence of one or more AK's, e.g. a scientist or a scientific community who or which is responsible for the elaboration of such an item of knowledge at time t_{x-1}.
The introduction of the possibility of interpreting KS as an AK provides a historical restraint on the nature of the items of knowledge[24] and it allows us to consider any body of knowledge, empirico-mathematical sciences included, as the outcome of human epistemic activities. The "historical

restraint" renders finally adequate the dichotomy "KS's linguistico-doxastic phenomena vs. epistemology" and enables us to maintain unvaried the dichotomy "epistemological vs. meta-epistemological problems". The former are problems concerning any instance of knowledge at L^1, including physics for example, while the latter are problems concerning a theory of knowledge. I shall now argue that objectionL^4 cannot be properly defined as epistemological but must be understood as a meta-epistemological issue since it is a difficulty faced only by a philosophy of knowledge.

18. An unclear grasp of the nature of the *diallelus* has often resulted in a confusion of the meta-epistemological issue, i.e. the justification of the premisses of a theory of knowledge, with an epistemological problem, i.e. the justification or foundation of KS's linguistico-doxastic phenomena, sciences included. On the one hand, both the common habit of talking of philosophers and of their theories of knowledge interchangeably, and the tendency to present conclusions concerning the nature of knowledge as if they were KS's conclusions about e.g. his beliefs may have contributed to this lack of clarity. On the other hand, it must be also recognized that if a theory of knowledge could be provided which does not beg the fundamental question of its own justification, then we would also be able to provide a justification for instances of knowledge at L^1; and conversely, if any theory of knowledge is invalidated by the "original sin" of a fundamental *petitio principii*, then the sceptical challenge at L^4 puts into question the only theoretical path available in order to answer objectionsL^2 arising with respect to the validity of knowledge. That the charge of circularity is not a direct problem for KS's knowledge at L^1, i.e. for the development of linguistico-doxastic phenomena including sciences, can be established on the basis of two considerations. The first, which I shall discuss in this paragraph, hinges on Alston's distinction between "being justified" and "being able to justify":[25] KS could be in fact justified in assuming the validity of P as an instance of knowledge, even if he himself is not able to justify P in a non-circular way. Formally speaking, this is just a way of saying that an actual and eventually inescapable circularity in the justification of P does not render contradictory (thus leaves as logically possible) the fact that P may be a highly acceptable statement supported by features of the world that a single individual or a science may never be able to state. Such a simple logical truth ('in fact $-p$ unless c" does not exclude that 'it is logically possible that p without c') may be extended as to include a less subject-orientated context. Alston's distinction allows us to see that even if a science cannot ground its first premisses without being itself caught in a vicious circle, this does not exclude the logical possibility that such premisses may be justified after all. Suppose for the sake of hypothesis that a premiss encoding the anti-Goodmanian principle whereby we assume that colours do not vary according to time (it is not the case that what is blue now has the property of being blue until time

x and green afterwards) could not be supported in physics without appealing to other principles that presuppose its validity. Even if this were the case it would still be logically possible to suppose that the premiss is justified on a basis thoroughly independent from our capacities of defending it in a non circular form.

Alston's distinction, nonetheless, establishes only a logical possibility. While its application may be satisfactory in so far as KS's linguistico-doxastic phenomena are concerned, the case becomes much more controversial when we take into account a theory of knowledge. If L^1 is not the level where we provide the justification for our knowledge and its own premisses but where we can delay it until a further stage by showing that the sceptical argument is only negative and not positively conclusive, the development of a theory of knowledge at L^3 is motivated (also) by the necessity of presenting the valid reasons which let us consider certain beliefs to be proper instances of knowledge. At that level it is no longer sufficient to say that the theory could be justified in assuming its premisses by some unknown, inexplicable state of affairs. It follows that Alston may be too optimistic when he seems to be convinced that the dichotomy could play a finally resolutive role with respect to objection L^4 (but see the quotation given in [22] in which Alston appears more sceptical). He maintains that the vicious circle is escaped because

so long as there *is* such a [valid epistemic] principle [that applies to p], that belief *is* justified whether I know anything about the principle or not and whether or not I am justified in supposing that there is such a principle. [...] To be justified in that higher-level belief ['I am justified in believing that p'], there has to be a (higher-level) epistemic principle of justification that applies in the right way to the belief in question. But again, all that is required is the *existence* of such a principle. For the justification of that (first-order) higher-level belief, it is not necessary that I be justified in supposing that there is such a principle; only that there be such.[26]

If we interpret the sceptical objection as if it concerned only L^1, I believe we should agree with Alston: the claim that we could be justified – although it may seem an ontological step into the realm of "what is the case", and therefore an answer in terms of "I am not yet unjustified in believing that p because it could be the case that I am justified in believing that p"[27] – is in fact an acceptable position, based on what is a logical feature of the argument. Demonstrating at L^1, as the sceptic seems to be able to do, that I cannot justify my beliefs unless I beg the question, is not equivalent to demonstrating that therefore I am not justified in holding such beliefs, and that I may not be able to show at L^x that I am so at L^{x-1}. However, the solution works at L^1 precisely because the logical distinction shows that the sceptic is not yet right and that we still have a possibility; it is like a "promissory note" introduced by means of clauses such as "provided that" or "so long as". These are conditionals which have a sort of ontological import, should be formulated in terms of possibility by means of a "can", and sooner or later must be satisfied if our position with respect to the

nature of knowledge is to avoid being grounded on a *petitio principii*. If I may enlarge on the analogy, I would say that although it is true that one could borrow money from friends and banks and live a lazy (if not happy) life until one dies, it is undeniable that the solution is inapplicable when we consider the level of economic structure of a human society. A theory of knowledge, if possible at all, works at the level where such conditionals must be transformed into a logical/causal connective (a "because...") and the latter supported by showing that the "can"-clause pin-points an actual fact, either logical or empirical. An appeal to the logical dichotomy "being justified/being able to justify" can postpone the elaboration of a theory of knowledge, but if the delay is *ad infinitum*, then we are losing the game and must admit that, when explicitly required, we are not able to justify our position. In another context this also seems to be Alston's position (cf. [22]). The theory should be able to show explicitly that it is in fact justified: that a theory of knowledge proceeds by virtually presupposing e.g. certain statements as instances of knowledge, amounts to say that we can take certain $?ps^k$ to be Ks because we take certain $?ps^k$ to be Ks, which is hardly an answer to the sceptical question (note that by this I am not asserting that there must or might be other possible answers; according to Chisholm, for example, there are not and the only solution is to beg the question). As Moritz Schlick neatly put it "epistemology is not as fortunately situated as the individual sciences, which can leave the verification of their foundations to a more general discipline; the theory of knowledge is concerned precisely with the ultimate presuppositions of *all* certainty. We can hope to overcome universal doubt only if we strip the difficulty of its wrappings and face it calmly."[28]

19. The second group of considerations I mean to introduce is slightly more complex, is suggested by Popper's "solution of Fries' trilemma",[29] and is connected with the diachronic development of KS's linguistico-doxastic phenomena or of sciences on the one hand, and of a theory of knowledge on the other. As before, in this case too we must distinguish between two questions: whether we may establish that objection[L4] is not a problem concerning instances of knowledge at L^1, and whether the same considerations may also show that objection[L4] is not a problem for a theory of knowledge at L^3.

The first issue can easily be settled. We know that the development of KS's set of e.g. beliefs is in continuous change: KS never reaches a final point from which he must reorganize all his $?ps^k$. His beliefs are formulated in a contingent and historically temporal sequence and, moment by moment, he may implicitly and automatically adopt one version or the other of the criterion C, according to his needs.[30] His beliefs are subject to a continuous control of feed-back, internal consistency and external adequacy, and without a finally fixed and structured body of beliefs, judgements or statements, it is not clear whether, and if so in what sense, the charge

of circularity could be directed against KS's procedure. The "dynamic" considerations made about KS's linguistico-doxastic phenomena can be readily extended to specific sciences like physics, biology and so on: in so far as these disciplines too are in continuous development, the problem of circularity can be dissolved by maintaining their premises open to an endless process of revision. It turns out that only a systematic and dogmatic (in the Sextian sense of the term) study of the nature of knowledge at L^3 can be meaningfully and radically threatened by the accusation of circularity, not the endless flux of the development of KS's knowledge at L^1. The fact that we leave open the possibility of re-assessing the validity of the premises of e.g. physics simply impedes the application of the sceptical argument. As long as we keep the Peircean "road of inquiry open", there is no way for the sceptic to raise his metatheoretical objections and be caught in a *petitio principii*.

20. Could we not adopt the same sort of reasoning in order to solve objection[L4] at L^5? Suppose we assume a "dynamic" position with respect to L^1, e.g. about KS's beliefs or the nature of physics, and therefore eliminate the problem of a fixed foundation for instances of knowledge at that primary level. Once such a "dynamic" principle is accepted in terms of a falsificationist criterion (which works as the principal premiss for our theory of knowledge) we know that objection[L4] holds that such a premiss is unjustified: the principle which attests that any instance of knowledge should be considered hypothetical and open to revision, itself aiming at being a member of S_d, is for the sceptic equally unjustified and open to revision. The dynamic solution of objections[L2], introduced at L^3, faces the sceptical objection[L4] as in all the other cases, and a Humean sceptic may argue, for example, that the falsificationist premiss itself, on which the theory of knowledge under consideration is based, is highly questionable since some beliefs after all seem to be unrevisable, without being for this reason true instances of knowledge (in terms of the relation between certainty and truth this is the Cartesian problem; see [28]). It is at this point that, to the request for a further justification of the assumption of the falsificationist premiss, we may be tempted to answer by re-appealing to a falsificationist solution at L^5 in order to solve objection[L4] dynamically, i.e. to obtain at L^5 the same result in favour of L^3 against objection[L4] which we have previously reached at L^3 in favour of L^1 against objections[L2]. We attach a universal quantifiers without limit of orders to our first epistemological principle and, since "all knowledge at any level is hypothetical", there is no need for a justification of our allegedly first epistemological principles.

   Is such a strategy really fruitful? I doubt it. Any epistemic statement can be hypothetical and put into question apart from the epistemic and epistemological principle itself which says so. If this difference of levels is not respected and we re-apply our "dynamic solution" to itself in order

to answer objection^{L4}, we are led to admit at L^5 that our L^3-theory of knowledge, hence our L^1-instances of knowledge, may not be open to revision after all. At this stage the validity of the "falsificationist principle", i.e. the premiss of our theory of knowledge, eliminates itself. Although the meta-epistemological and falsificationist principle may claim to have reached a level of adoption which posits itself "externally" with respect to the dialectic of doubt and certainty – that is, although the principle may aim at presenting itself as the framework within which the epistemological discourse is developed but which does not belong to it – it seems uncontroversial that the extension, and thus self-referential nature of the principle, implies that there is no L^x-level – i.e. there is no a-historical, spectator's point of view, as Dewey would call it – which is not subject to the falsificationist conclusion itself reached at L^{x-1}. The occurrence of an objection^{L6}, parallel to the one expounded at L^4, against the justification of our L^5-solution, leads us to a further, dynamic solution and so on *ad infinitum*. The spiral can never enable us to establish at L^x whether instances of knowledge at L^{x-1} are really open to revision or not.[31] Thus, if we try to adopt a dynamic solution of the meta-epistemological problem, the final consequence would not be simply, and as the "dynamist" is inclined to think, that all human knowledge – i.e. all instances of knowledge at L^1 – is open to revision (a very reasonable point, given our human fallibility), but that we do not even know whether or not our knowledge is in fact open to revision without *merely assuming* that our knowledge is in fact open to revision. Lakatos wrote that "to the indefatigable sceptic who will ask again: 'How do you *know* that you improve your guesses [i.e. your open-to-falsification me-taprinciples]?', "we may answer that we *guess*, and that "there is nothing wrong with an infinite regress of guesses."[32] The point which needs to be made equally clear now is that there is nothing epistemologically right either. Once we have admitted that *we were guessing about the fact that we were guessing*, we cannot be certain that what we have in front of us is not just a pointless regress of guesses which falsify each other in an infinite and rather pointless escalation thoroughly independent of the real state of the world. By adopting the dynamic spiral caused by the self-referential principle "all knowledge is hypothetical, including this principle" we end by having no conception of knowledge at all. Our theory so defended becomes epistemologically non-informative since the adoption of the dynamic solution at the meta-epistemological level empties the theory of knowledge of its positive content, erases certainty at any level and finally eliminates itself like the sceptical procedure of "sumperigrafei" (cf. Sextus' *Outlines* of Pyrrhonism I. 14, 206 and II. 188 and *Against the Logicians*, II. 480). Two further consequences of this conclusion deserve to be stressed. First, once the dynamic solution has been adopted, there is still a possible position the dynamist may want to take in connection with the *regressus*, but this is such as to represent an obvious withdrawal from the purpose of advocating the possibility of a theory of knowledge which defends

positive theses about the nature of knowledge. Upon realizing that his dynamic solution of objection$L4$ puts him in a situation in which he no longer knows whether, or no longer has good reasons to maintain that "all knowledge at any level is open to revision," the dynamist may be ready to adopt an ethical basis for such a transformation. The endless process itself may be transformed into the aim, that is into the final goal of the epistemic enterprise. Thus the constant search for knowledge and falsification may be converted into a form of critical rationalism, a sort of ethics of the Enlightenment without certainties. At this point the practical outcome of the critical enterprise is virtually indistinguishable from the Pyrrhonist option, and the debate between the dynamist and the sceptic becomes only a matter of the ethical and epistemologically unjustified commitments of the observers.[33] The dynamist will keep on ascending the levels of falsification confident in the ethical value of the enterprise. He will be inclined to see the endless process of criticism as an example of an open-minded and progressive attitude in relation to the growth of knowledge. The Pyrrhonist – who, contrary to the Dogmatic and the Academic philosopher, never believes to have found the object of his search – will also keep on searching,[34] because scepticism in itself is a dynamic ability (*dynamis*),[35] but with no illusions about the fruitfulness of the process. So that a pessimistic observer such as Sextus Empiricus[36] will be entitled to maintain that we are like men searching for gold, or shooting at a target in a dark room: no matter how long the search or the shooting proceeds, it is *pointless* because in principle there is no way to establish whether any of us has found a nugget or hit the mark. To be able to show negatively that so far you have been unsuccessful seems to be insufficient to make any difference between the two attitudes. Of course, for exactly the same reasons the dynamist can always reply that neither the sceptic can demonstrate that we did not in fact find a nugget or hit the mark. But to the perpetually-searching dynamist, the sceptic may finally rejoin that, for the sake of our peace of mind, it may profit us more to abstain from the search for knowledge.[37]

The second point which turns out to be central to our investigation is that the similarities between the dynamist and sceptical strategies further clarify the fact that the dynamic approach, fruitful in the case of KS's linguistico-doxastic phenomena, does not provide the basis for a positive strategy in favour of the validity of a theory of knowledge. An affirmative answer can be given to the question as to whether a "dynamic consideration" could prove that objection$L4$ is not a problem for L^1-instances of knowledge. The second question was whether the same considerations may solve objection$L4$ and the answer is now negative, unless we accept that we should give up the project to establish for a theory of knowledge *tout court*. The adoption of a dynamic strategy implies the abandonment of the project of a theory of knowledge and with this, indirectly, the sceptical abstention from judgement about the nature of knowledge as a faithful representation

of the external world which could be more or less justified. The fact that such a metatheoretical dynamic solution amounts to the admission of the correctness of the sceptical objection[L4], and therefore to the departure from the classic epistemological enterprise, is not and cannot be an argument against the dynamist attitude. The never-ending dynamist evasion from the problem is an open option for those who are not interested in defending the importance and the validity of a theory of knowledge at a metatheoretical level. It is rather a way of making explicit that, if our aim is to justify a theory of knowledge, the dynamist strategy is inapplicable since it solves objection[L4] by dissolving the very possibility of a theory of knowledge. No wonder that there is no problem at the meta-epistemological level, for there is no siege without a castle. Of course, a completely different question is whether or not the dynamist solution is the only available alternative to a total scepticism and therefore whether it may be chosen as the lesser evil.

21. The outcome of the last three paragraphs is that there is an important point missed by the dynamic solutions, namely that a theory of knowledge ranks at the theoretical level where hypotheses about the nature of knowledge must be elaborated without claiming, but certainly with the hope that one may have reached valid and definitive conclusions. In order to achieve this task, a theory must be in principle successfully defensible against the sceptical attack. Its premises must be liable to some sort of justification, although perhaps one which satisfies rather lower standards than those settled on by Descartes. If a theory of knowledge is possible at all, it must have a potentially "definitive nature", that is it cannot rely on a never-ending regress, and must aim at being based on explicit premises which are in principle maximally justified and safe against the sceptical challenge. All this is not tantamount to saying that a philosophy of knowledge (in the old-fashioned sense of the expression we know from modern philosophy) leads to, or even aims at, a repression of epistemic advances by means of the fixation of a final, no longer increasable body of justified instances of knowledge. Quite the opposite, a philosophy of knowledge aims at the detection of a final basis on which it might be possible to remove doubts about the validity of the rest of our knowledge: it goes to the foundations of our knowledge to check their purpose and stability, as it were. If successful, the epistemological enterprise is far from being "conservative", but is directed to an increase in our confidence in the positive nature of our knowledge and in the development of epistemic research. Likewise, the "definitive nature" of a philosophy of knowledge should not be understood as if the goal of the latter were that of individuating the only conceivable ground on which we may justify the possibility of knowledge, as the result of a valid relationship to the external world. Although it may seem that one successful philosophy of knowledge is all we need for our task, this is not a good reason to exclude that there may be a plurality of approaches

to the justification and explanation of our knowledge, all equally valid, and that each approach might be "epistemologically tolerant" with respect to its own alternatives. To state that a theory of knowledge must aim at having a "definitive nature" is tantamount to saying that an enlargement of the dynamic solution from instances of knowledge at L^1 to the foundation of a philosophy of knowledge at L^4 corresponds to the acceptance of the sceptical attack. Either a philosophy of knowledge achieves, or at least hopes to be successful in providing, a definitive ground for its own justification, or there is no general philosophy of knowledge, no *Erkenntnistheorie*, at all.

I shall conclude by saying that if there is an *epistemic circularity* of KS's $?ps^k$ identifiable at L^2, in any case it can be of no harm to the epistemic validity of KS's $?ps^k$. On the contrary, the *epistemological circularity* of a theory of knowledge identified at L^4 could radically undermine the metatheoretic grounds on which the theory itself has been developed and, if it cannot somehow be neutralized, it deprives the theory itself of its convincing power with respect to objections^{L2}. If the problem of the justification of a theory of knowledge cannot be prevented, solved or circumvented, there seems to be no other alternative than a critical acceptance of a more or less radical scepticism about the ultimate capacity of human knowledge to justify itself as a reliable medium that puts the subject in contact with the objection. One may note that nowadays such a meta-epistemological scepticism is rather diffused among philosophers of science, who seem to be ready to accept a dynamic approach in order to postpone the problem of justification of L^1-instances, no matter whether this implies the abandonment of the project for a general theory of knowledge at L^3.

At this point, it is time for me to outline the most acceptable orientations that strategies for the treatment of the problem may take. In so doing I shall also be able to point out some further limitations to the possibility of solving the meta-epistemological problem.

4. FEATURES AND LIMITS OF ANTI-SCEPTICAL STRATEGIES

22. In connection with the distinction introduced above between epistemic and epistemological circularity, William Alston has written that

so far as epistemic circularity is concerned, I can justify and be justified in taking the source [of knowledge] to be reliable and to be a source of justification. But as soon as I direct a critical scrutiny on this happy state of affairs it disappears before my eyes; it eludes my reflective grasp. When I try to be fully critical about my justification I very soon run into logical circularity. I can justify, or be justified in, accepting either particular perceptual propositions or a general principle of perceptual justification or reliability, only by practically accepting that principle of reliability. But in the enterprise of seeking to answer critical questions whenever they arise one is driven to convert that practical justification into theoretical justification. And that is where we run into logical circularity.[38]

In the light of the previous diagnosis of the problem, Alston's remarks suggest the possibility of a comparison between the apparently inescapable meta-epistemological circle and the wider phenomenon discussed by Jon Elster under the heading of the fallacy of secondary effects.[39] Such fallacies and the possibility of solving them have been largely studied within the context of psychotherapeutic strategies by Gregory Bateson and the School of Palo Alto.[40] Two examples which are often given are Peter, who cannot solve his problem of insomnia if he pretends to convince himself that he should try to sleep and Mary, who cannot be spontaneous if she wants to be so, for if she wants to be spontaneous she becomes immediately affected. The similarity between such "catch-22 situations"[41] and our meta-epistemological problem lies in the fact that they all share the same circular nature. Their morphology is such that attempts made in search for a direct solution – that is attempts to find a solution within the context settled by the problem itself, like trying to sleep or to be spontaneous by an act of will, or present some final justification which in turn may not be in need of further support – turn out to be part of the very problem addressed. Thus, such direct approaches are at best fruitless and in the worse case may even result in a progressive reinforcement of the vicious circle established by the self-referential logic of the issue at stake. In our case, a direct solution of the *diallelus* strives to exploit precisely that justificatory element which is the *ratio essendi* of the problem and therefore can hardly succeed in escaping the vicious circle summarized by the famous question "Quis custodiet ipsos custodes?"

The nature of the fallacies of secondary effects is such that their resolution can be pursued only in an indirect way, if in any. In the example given above, Elster reminds us that Peter may fight his insomnia by following the medical advice of registering the various symptoms he feels while being sleepless; the solution will work provided that Peter is not aware that his doctor is not interested in his report but in fact wants to provide him with an indirect way to re-acquire some sleep. The reader may be well acquainted with another example: sometimes we can loosen a rusty screw only by hammering it in a bit further. By recognizing some resemblance between the fallacies of secondary effects and our meta-epistemological problem, I do not mean to lay down the basis for a psychologistic approach, but I intend to suggest, heuristicaly, that if there is a solution to the latter this might be equally "oblique". Given the logical morphology of the problem and the basic ubiquity of the notion of justification at any level of knowledge and epistemological analysis, it seems that there is no way of dealing with the *diallelus* successfully unless we modify the conceptual environment which renders the foundationalist problem possible. Reflection on the *diallelus* pushes us towards a change in the orientation of our search for a solution, namely towards the removal of some of the elements which form the framework within which the question of the justification of a theory of knowledge can arise. Like in the case of the fallacies of secondary

effects, it seems totally pointless to insist on searching for a straight answer, accepting in our case the very same justificatory logic which prompts us towards the impossible quest for an unshakeable foundation. A better way of dealing with the issue is probably an indirect manœuvre that may interact with the foundationalist question itself, attempting to modify it before answering it.

23. Once we accept that, if possible, a solution of the meta-epistemological problem is indirect and tackles its roots we may take a first step towards a more precise characterization of such an indirectness by elucidating what may count as a direct solution and another simple image.[42]

24. It is a direct (alleged) solution of objection[L4] any solution that violates what Husserl called *das erkenntnistheoretische Prinzip* (the gnoseological principle). Such a principle represents the other side of the methodological process of affixing an "index of questionability" to every member of S_d. It posits that the justificatory ground of a theory of knowledge cannot be provided by other instances of knowledge. According to the terminology adopted here, a solution of the meta-epistemological problem cannot be a direct solution in the sense that we cannot hope to provide an answer to objection[L4] by anchoring a theory of knowledge at L^5 to some instances of knowledge extracted from S_d at L^1. The infringement of Husserl's *Prinzip* can be considered of a piece with the so-called "naturalistic fallacy" in ethics: according to Richard Rorty, who quotes Sellars,[43] such a fallacy is committed by any purely descriptive approach like Locke's to the problem of justification, and we can include under the same heading both the search for the "given" – i.e. the search for instances of knowledge which, being the most simple and basic expressions of knowledge, could provide a justificatory ground for the rest of our knowledge without requiring any justification for themselves – and the adoption of the dichotomy immediate vs. mediate justification of p, a distinction which purports to show that p could justify q without being in need of any justification by a previous m. In regard to this issue, it is important to stress here that although a theory of the self-justification of p works at the same primary level of the Cartesian "cogito" we shall see in [27] that the latter is a slightly different case because, contrary to the allegedly immediately justified statements, it may be considered empty of any empirical content and in this sense as an indirect solution of objection[L4]. For the moment, suffice it to say that if we were focusing on the logical structure of the answer, and not just of the question, an approach based on the previous dichotomy could be interpreted as "indirect" in so far as it rejects the alternative whereby any p is either justified or unjustified. The restriction introduced by *das erkenntnistheoretische Prinzip* can be summarized thus: at the level of KS's knowledge the *petitio principii* is not effective, but once the theory of knowledge which recognizes the problems concerning L^1 also admits the

difficulty of the justification of its own position at L^4, it cannot go back to L^1 in order to solve the problem which arose at L^4 and at the same time really escape the circle. Its adoption of a L^1-solution would amount to an attempt to provide a direct treatment of the problem and is bound to be caught either in the naturalistic fallacy or in the restatement of the *petitio principii* (what justifies the assumption of a certain description e.g. of our mental processes as the reliable processes which lead to the production of knowledge? Why some basic p should count as the proper ground for our theory? Their certainty is not equivalent to their truth, and the fact that they are reached e.g. by means of an intuition can only give rise to another vicious circle).

Husserl came to formulate his *Prinzip* by reacting against his previous psychologism and this accounts for the fact that the principle can be easily enlarged in the following conclusion: in so far as any cognitive science is a "science of knowledge", i.e. it has or aspires to have the status of empirical knowledge concerning the nature of knowledge and thus it professes to belong to S_K at L^1, it also becomes unable to provide a non-circular solution to the meta-epistemological problem. A cognitive science cannot have it both ways. Either it differentiates itself from a philosophical theory of knowledge by being empirically testable, predictive etc., but then in so far as it claims to be also a theory of knowledge it plainly begs the meta-epistemological question of the justification of its own first premises; or it claims to be able to solve, among other problems, the meta-epistemological circle as well, but then it must provide an indirect solution which cannot be in itself an instance of empirical knowledge and with respect to which the cognitive science must abandon any aspiration to gain the status of empirical science.[44] Of course all this is not to say that a cognitive approach to the nature of knowledge is not viable or fruitful but that, in so far as the meta-epistemological problem is concerned, as in the case of the "dynamic solution", the cognitive option is left open to all the epistemologists who are ready to sacrifice the possibility of a philosophical theory of knowledge at L^3 in favour of a scientific investigation of the nature of instances of knowledge at L^1. The outlook of a "cognitivist" proves to be not very different from the rather sceptical position already endorsed by the "dynamist": as far as the possibility of an *Erkenntnistheorie* is concerned, Carneades, epistemologically the most optimistic of the sceptics, is in the same position as the more pessimistic of the "cognitive epistemologists".

25. "Descriptivism", "givenism" and "cognitivism" represent three very popular typologies of direct solutions to objection[L4]. Visually speaking, we may consider them right-wing because they place themselves on the right-hand side of the sceptical question, after the *Index der Fraglichkeit*. Although they may pretend to disregard it, such solutions follow from the sceptical challenge and try to force the sceptic to recognize that they

have been able to answer his problem. Whether they explicitly attempt to refute the sceptical challenge or not, the degree of their success is in principle undermined by the morphology of the problem.

26. An indirect solution of objection[L4] is never right-wing, i.e. it never violates Husserl's *Prinzip*. But since from Husserl's *Prinzip* it follows that any acceptable solution to the problem will have to be empirically empty – both in the sense that it must not be provided by an empirical-scientific finding, and in the sense that it must not be an instance of empirical knowledge in itself either – it seems that any indirect solution will have to work at the level of the logical structure of the problem. Now the formal aspects of the issue on which any strategy may concentrate can be divided into three areas: the justificatory logic of the problem (Is the problem rightly formulated? Are we really forced to accept the dichotomy justification vs. scepticism? What notion of justification is involved in the formulation of the problem ?) its context of formulation (What happens when we wonder about the nature of knowledge? What happens if we reflect on objection[L4] itself ?) and its premises (How did we come to formulate objection[L4]? What are the conditions that make it possible? Is the sceptical challenge consistent or rather self-defeating ?). Within such a tripartition, four principal indirect strategies have been dominant: the falsificationist and the coherentist, both working on the nature of the notion of justification; the Cartesian-like, which concentrates on the self-reflective nature of the sceptical process of doubting; and the Kantian-like, which tackles the conditions that make the entire problem possible. Of course these four directions within each area do not provide an exhaustive map of all the typologies of indirect strategies that may be adopted against objection[L4]. Rather, they represent the main headings under which families of philosophers can be grouped as sharing the same kind of orientation. Thus, just to provide a specific example, two recent attempts to "refute the sceptic" by Nicholas Rescher and A. C. Grayling[45] have more or less explicitly adopted a transcendental approach – in terms of the pragmatic and linguistic conditions that make possible the epistemic process – thus placing themselves on the Kantian side of the various indirect solutions to the sceptical challenge.

Because of their positions in respect of the sceptical question I shall label the former three "central" (they work on the problem) and the latter "left-wing" (it works on the "situation" which takes place before, and leads to the formulation of the problem). Let me proceed in chronological order.

27. The Cartesian solution is represented by the "cogito" and is based on the logical identity between the process of doubting and the certainty of the occurrence of the process itself: KS retreats from a direct justification of his knowledge of the external world in favour of its indirect justification based on the reflective certainty of his mental process, occurring in the "internal world", in the course of the research itself for a final foundation.

Descartes solution is indirect, empirically empty (is based on the logical reflexivity of the process), relies on the logical principle of identity, requires the activity of a knowing subject and it aims at the discovery of one single certainty reached by self-investigation, i.e. it works at the L^1-level. For all these different aspects it is generally labelled "subjective/internal foundationalism".

Descartes' "subjective/internal foundationalism" shows its limit as a solution of objection$L4$ when it attempts to fill the gap between the notion of certainty and that of truth. The constitution of such a bridge requires a reference to a veridical "centre of ontic power" which may ensure the reliability, in terms of their truthfulness about the external world, of our mental representations which are clear and distinct and therefore indubitable. Since in Descartes such a "centre" is different from the reflective subject, i.e. the "centre of epistemic power", the passage from certainty to truth gives rise to the so-called Cartesian circle: the existence of a veridical "centre of ontic power" is demonstrated on the basis of an epistemic process based on the certainty reached in the self-referential process (the "centre of epistemic power") whose truthfulness was precisely in question and in its turn required a veridical "centre of ontic power", so that the bridge between certainty and truth ends by being presupposed. The Cartesian circle renders the "cogito" insufficient to solve the meta-epistemological problem. In so far as the "cogito" can be considered an empirically and informative unextended point – i.e. a purely logical, a-empirical and non-informative self-reflection whereby we reach a certainty about the epistemic activity of doubting – it is also the point on which the Archimedean level may hinge in order to reconstruct our body of knowledge and therefore the source for a correctly indirect solution of the problem. But precisely its epistemically unextended nature, which saves it from the sceptical attack, renders the "cogito" incapable of filling the empty set of our instances of knowledge when a first, indubitable instance of knowledge is required. Analogically, we can understand our knowledge as based on the "cogito" in the same way as we understand that a segment is made of unextended points, but we can hardly reconstruct our knowledge from the "cogito", for how do we escape from the inextension of the logical point? The "cogito" may enable us to establish that $\{?pk_1, ?pk_2, ..., ?pk_n\}$ have the fundamental property of being indubitable by us, it does not seem to be capable of eliminating their "ontological" *Index der Fraglichkeit* without calling into play a veridical God and thus committing a *petitio principii*. Along this line, the objection of Leszek Kolakowski[46] to Husserl's revival of the Cartesian solution can be summarized by saying that there is no way to escalate from the "cogito" to the justification of our knowledge unless we either beg the question – and this seems[47] to be Descartes' moderate solution – or we identify the two centres of power assuming that the self-reflective activity of the subject is somehow identical to the ontic constitution of what is known. Such a radical outcome, which according to Kolakowski

renders the later Husserl a defender of a version of idealism, would not be understandable without a previous shift on the left, a step into the Kantian approach and the importance that the notion of systematic reflection acquires in German idealism.

28. The transcendental solution focuses on the reason why we are wondering about the nature of knowledge and especially the status of a theory of knowledge. In this sense it works at the highest possible level of reflection, say L^W, where even the inquiry itself becomes the matter of investigation. This is an advantage over the Cartesian "cogito": we do not have the problem of enlarging our narrow horizon represented by the minimal certainty of the "ego cogito" because we have already assumed the widest possible perspective. At the transcendental level even the sceptical challenge is taken into consideration as the subject of our reflection and reconducted within the logic of argumentation. After all, the sceptic himself has to make use of some logical tools in order to unhinge our foundational propositions. It is precisely the linguistic, argumentative and semantic horizon within which the sceptic organizes his attack which represents the kind of "rock bottom" from which we may start to build our conception of knowledge. Needless to say, the transcendental approach was obviously one of the major findings of Kant's criticism. Unfortunately, as is also well known, Kant himself directed the transcendental analysis only towards the status of $\{?pk_1, ?pk_2, ..., ?pk_n\}$ – the whole epistemic activity of the ego is recognized to be constitutive of the known reality – and not towards the possibility of a theory itself, a *Critique of Pure Reason*. Since Kant did not bring to final completion his transcendental analysis, Hegel was able to underline that he had underestimated the importance of the sceptical challenge and had been caught in another unjustified version of Lockean descriptivism.[48] It seems that the radicalization of the transcendental reflection was left to the later Wittgenstein to be carried out. Wittgenstein does take the sceptical attack seriously. In *On Certainty* he places the sceptical challenge within the limits of the epistemic grammar that make possible the general linguistic game of believing and doubting. There we read that "... the *questions* that we raise and our *doubts* depend on the fact that some propositions are exempt from doubt, are as it were like hinges on which those turn" (*On Certainty*, p. 341), "Doubting and non-doubting behaviour. There is the first only if there is the second" (*Ibid.*, p. 354), "One doubts on specific grounds. The question is this: How is doubt introduced in the language-game?" (*Ibid.*, p. 458). Systematic doubts of a Cartesian nature lead one's reflection to recognize the perimeter of rational discourse. If we stop in our quest for justifications this is not just because we arbitrarily endorse some premisses we find undoubtable – as one of the horn of the trilemma would have it – but because we cannot proceed any further than the logical and semantic limits pointed-out but also accepted-by sceptical questioning itself.

The difficulty affecting any transcendental approach, either idealistic or linguistic, is that the world in itself remains in principle excluded from our knowledge. The *coincidentia* between the laws of thought or the grammar of our language games and the essential nature of external reference can never be granted from within the transcendental perspective itself. The subjective perspective underlying any form of transcendetalism represents at the same time the force and the weakness of such an approach. We answer the sceptic by pointing out that with the *diallelus* our reflection has reached the *non plus ultra* limit: we are unable to go beyond certain basic premises which are shared by the same sceptical dialectic without simply restating the point called into question. But drawing a final line from within means at the same time to exclude the possibility of being able to consider anything else outside. The world in itself remains a inscrutable and impenetrable land.

29. The strengthening of the Kantian transcendental idealism into Hegel's absolute idealism adopts the Cartesian solution of the centrality of the "ego cogitans" together with its certainty, orientates its approach starting from a general theory of all knowledge at L^W (the ego is no more Cartesian-psychological but Kantian-transcendental) but attempts to overcome the fundamental dualism congenital to the transcendental solution by abandoning a conception of knowledge as a relation between knower and known, as a sort of tool handled by the subject to deal with an external object. The idealistic approach may or may not represent a solution to the foundationalist issue depending on whether we are ready to subscribe to its initial appeal to a monistic vision of the universe and of human knowledge within it. It is only thanks to the removal of the dualism mind/being that the idealist can drop the justificatory issue in favour of an explanatory task. If there is no real opposition between knower and known the justificatory nature of the epistemological problem becomes one of systematic and exhaustive explanation of why the parts cohere with the whole. A philosophy of knowledge becomes a descriptive enterprise, in a way in which it does not admit of anything else extraneous to the whole picture. It is in this sense that it may also acquire a grounding valency: the inferential and asymmetric notion of justificatory arguments adopted by all foundationalist projects is substituted by a coherentist interpretation (p is justified or true iff it is a coherent part of a more complex body of knowledge which in turn is the only real truth- or justification-bearer; a similar holistic and symmetric conception of the justificatory link has been recently revalued by Laurence BonJour[49]). The absolute and its logico-epistemic description *conventuntur* because in the end they do not differ at all. The philosophical foundation of our knowledge extends to the synthesis of the conditions of all forms of knowledge. Instead of being answered, objection[L4] is eliminated since, in the long run, scepticism is bound to be absorbed within the development and transformation of human knowledge as one of its

moments, as a critical phase necessary to, but at the same time "overcomable" by the speculative reason. The whole systematic reconstruction of knowledge occupies the entire theoretical space in which it is still meaningful to ask for a justification of the theory suffocating, as it were, the sceptical challenge which requires an initial acceptance of a fundamental dualism.

It is interesting to note that the feature of the speculative systematicity has Kantian origins and will be one of the matrices for a revival of a transcendental approach in some neo-Kantians philosophers like Leonard Nelson and Ernst Cassirer. It is not by chance that both appreciated Hilbert's program in philosophy of mathematics[50] according to which the foundation of mathematics was to be achieved not directly, by means of straight deductions, but indirectly and metatheoretically in terms of an exhaustive formalization of all mathematical theories and the proof of their non-contradictorines. Cassirer expressed the core of this approach (of which his 'Philosophy of Symbolic Forms' can be interpreted as the corresponding, attempted realization in philosophy) in an insightful observation: "Wenn der Gedanke das Unendliche nicht direkt ergreifen kann, so soll er doch im Endlichen nach allen seiten schreiten" ("Although thought cannot grasp directly the unlimited/absolute, it is expected to cover the limited in all senses").[51]

Whether all these forms of idealism that rank as ontologically extreme left-wing solutions may really solve the foundationalist issue, given the difficulties concerning the possibility of constructing a total system of knowledge containing its own confirmation, is already questionable, especially if one reflects on the negative conclusions reached at this proposal by Kurt Gödel in the far more formal and limited field of mathematical knowledge. Moreover, historic events during the last century have also undermined further the empirical basis of a philosophy which appeals to a universal harmony of great intellectual beauty, but fails short of trivial sense of reality (it is a long time since any philosopher has attempted to write a new optimistic theodicy such as Hegel's[52]). What seems to be certain is the fact that in the attempt to recompose the broken picture of the world and of our place in it, idealistic theories tend to lose the sense of the existence of external reality as something thoroughly independent from the epistemic, logical or symbolic activities of reason. The world is devalued in favour of a Reason which is either placed somewhere else than in the brains of men – and we have in this case the theologically flavoured form of objective idealism – or more naively understood as our rationality, as it is in the case of more anthropocentric forms of idealism. The central point in the search for a final foundation is the dichotomy between thought and matter, mind and being. It is only because we suppose there is a gap between our way of thinking the world and the way the world may be in itself, because we think that not all relations are internal relations of articulation of a whole, that we are in need of a foundation for our

knowledge. Such a dichotomy is probably one of the most significant and profound innovations that we owe to modern philosophy, one further developed by post-Hegelian philosophers such as Schoperhauer, Nietzsche and Kierkegaard. If we deny it at the outset then we are back to a pre-Cartesian philosophy. Certainly, rationality and reality, knowing and being may then become once again two sides of the same coin. But the unification of the two centres of epistemic and ontic power into one and unique source of order requires a rationalistic panlogism which Voltaire in his polemic against Leibniz already considered as scarcely acceptable.

It would not be fair to the importance of absolute idealism to end this paragraph without underlining it positive contribution to the discussion of the problem. Hegel's important inheritance consists in the recognition that the process of transcendental analysis aiming at a solution of the foundationalist issue must itself be self-reflective, both to the effect that it must always be able to apply its own results to itself consistently, and to the effect that it will have to include its condition of possibility among the issues to be discussed when dealing with the problem of a final foundation. Thus the Hegelian contribution amounts to a lesson of total historicism in the sense that there is no perspective from which we can consider the nature of knowledge that is at the same time completely external to the process in question.

30. We now come to the last great attempt that has been made to solve the *diallelus*. We know that a falsificationist solution reacts both to the subjectivism and to the justificatory logic within which the problem has been traditionally framed. Generally less metaphysical than those sketched so far, the dynamist strategy tends to reformulate objection[L4] by dropping the requirement for a direct justification of the first principles of a philosophy of knowledge and in this respect it is on the right way towards an indirect solution of the *diallelus*. However, we have seen that as soon as the dynamist approach identifies in the justificatory requirements the aspect of the problem which needs to be thoroughly eliminated, its acceptability decreases dramatically.[53] Surely a very strict, justificatory prerequisite represents an important constituent of the foundationalist problem and therefore the dynamist is correct in addressing this side of the issue. Nevertheless, a complete abandonment at any level and in all senses of the Cartesian project for a foundation of our knowledge, hence of an epistemology, impedes the attainment of a stage at which the certainty of any other general consideration about the nature of knowledge and epistemology may be hoped to be gained, at least in principle, and undermines the basis for the dynamic approach itself. We do not need to dwell on this point any further for I have already discussed it at length above. However, one may still need to stress the fact that the falsificationist proposal has helped philosophical reflection to separate the logic of the notion of justification from other questions at stake in the foundationalist debate and to clarify

it as one of the main debatable components of the meta-epistemological problem.

31. At the end of the recostruction of the historical metamorphoses undergone by the foundationalist issue I wrote that future research should have the objective of providing a logical analysis of the problem and a phenomenology of the main solutions attempted. I hope I have accomplished this task with sufficient clarity in this context. The third and last stage of this project remains of course the formulation of a positive strategy. The reader may have guessed with whom my sympathies lie,[54] but having reached the last page of this article he or she already knows that this is a task which I will leave for a future work.[55]

NOTES

[1] Some of the most important works on the issue appeared in English are R. Chisholm, 'The Problem of the Criterion', in *The Foundations of Knowing* (Brighton: The Harvester Press, 1982): Part III, chap. 5 (first appeared in 1973 as *The Aquinas Lecture* and published by Marquette University); R. P. Amico, 'Roderick Chisholm and the Problem of the Criterion', R. Chisholm, 'Reply to Amico on the Problem of the Criterion' and R. P. Amico, 'Reply to Chisholm on the Problem of the Criterion', all in *Philosophical Papers* 17: 217–229, 231–4 and 235–6 respectively; K. O. Apel, 'The Problem of Philosophical Fundamental-Grounding in Light of a Transcendental Pragmatic of Language', *Man & World* 8 (1975): 239–75; H. Albert, *Treatise on Critical Reason* (Princeton: Princeton U. P., 1985) and I. Lakatos, 'Infinite Regress and Foundations of Mathematics' in *Philosophical Papers* II, ed. by J. Worrall and G. Currie (Cambridge: Cambridge U. P., 1978): pp. 3–23. For a skeptical approach to the theoretical nature of the issue see Stephen Cade Hetherington *Epistemology's Paradox. Is a Theory of Knowledge possible?* (Savage: Rowmen & Littlefield, 1992).

[2] In 'The Problem of the Justification of a Theory of Knowledge: (1) Some Historical Metamorphoses', forthcoming in this Journal.

[3] Cf. K. Popper, *The Logic of Scientific Discovery* (London: Hutchinson, 1959). See also L. Nelson, 'The Impossibility of the Theory of Knowledge', in *Socratic Method and Critical Philosophy, Selected Essays*, trans. by T. K. Brown III, foreword by B. Blanshard, introduction by J. Kraft (New York: Dover, 1965): pp. 185–205.

[4] Cf. J. Van Cleve, 'Foundationalism, Epistemic Principles, and the Cartesian Circle', *Philosophical Review* 88 (1979), 55–91, esp. note 2, p. 56.

[5] Sextus Empiricus, *Outlines of Pyrrhonism*, trans. by R. G. Bury, (Cambridge Mass. : Harvard U. P., 1976): I. 115–17 and II. 20. On Agrippa's five tropes see the recent analysis provided by J. Barnes, *The Toils of Scepticism* (Cambridge: Cambridge U. P., 1990): esp. chap. 5.

[6] P. Woodruff, 'Plato's Early Theory of Knowledge', in *Epistemology*, ed. by Stephen Everson (Cambridge: Cambridge U. P., 1990), pp. 60–84, quotation from p. 61.

[7] Cf. p. 18 of 'The Sceptic in his Place and Time', in *Scepticism from the Renaissance to the Enlightenment*, ed. by Richard H. Popkin and Charles B. Schmitt (Wiesbaden: Otto Harrassowitz, 1987; these are the proceedings of a conference held at the Herzog August Bibliothek, 22–25 February 1984), pp. 13–43.

[8] The difficulty is discussed by M. F. Burnyeat in 'Can the Skeptic Live His Scepticism?', in *The Skeptical Tradition*, ed. by M. Burnyeat (Los Angeles: University of California Press, 1983), pp. 117–148.

[9] Cf. R. Descartes, *The Philosophical Writings of Descartes*, 2 vols., ed. by J. Cottingham, R. Stoothoff and D. Murdoch, (Cambridge: Cambridge U. P., 1984), p. 324. For a strictly

set-theoretic reconstruction of the foundationalist problem, see Johannes Friedmann, 'Bemerkungen zum Münchhausen-Trilemma', *Erkenntnis* **20** (1983), 329–340. I may add here that I agree with Friedmann on his final suggestion for a logically less strict requirement of justification. However, if his remark on a criterion of justification based on the Scientific Community (p. 338) is not just an observation of a matter of fact but should be taken as a proposal, I am not certain it actually escapes the foundationalist circle.

[10] I shall assume, with Kant, that 'existence' is not a *property* or a *quality* (in the sense of the scholastic 'attributes') of something, but a sort of modal position among possible ways of being and use 'nature' in order to refer both to the existence and to the properties of the external world.

[11] Cf. E. Husserl, *Die Idee der Phaenomenologie. Fünf Vorlesungen*, in *Gesammelte Werke*, Band II, ed. by Walter Biemel (The Hague: Martinus Nijhoff, 1958). Unfortunately the efficacious expression is not translated literally in the Eng. trans. *The Idea of Phenomenology*, by W. P. Alston and G. Nakhnikian (The Hague: Martinus Nijhoff, 1964) p. 22.

[12] Cf. Sextus Empiricus, *Outlines of Pyrrhonism*: I. chaps. X and I. 59.

[13] It is worth noticing that Quine's holistic approach denies precisely the implication present in this possibility, i.e. that the sceptic may put into question a theory statement by statement. That Quine's epistemology naturalized is not a final answer to the sceptical challenge has been argued, I believe very convincingly, by Barry Stroud in 'The Significance of Naturalized Epistemology', in *Midwest Studies in Philosophy* VI: *The Foundations of Analytic Philosophy* ed. by P. A. French, T. E. Uehling and H. K. Wettstein (The University of Minnesota Press, 1981), pp. 455–471 (revised in *The Significance of Philosophical Scepticism* (Oxford: Clarendon, 1984), but see also W. V. O. Quine, 'Reply to Stroud', *ibid.*, pp. 473–5.

[14] In this way it has been possible to consider Meno's paradox as a metatheoretical issue, cf. Plato, *Meno*, 80d and ff., and Sextus Empiricus, *Against the Dogmatists*, trans. by R. G. Bury, (Cambridge Mass. : Harvard U. P., 1976), II. 331a: 'How can anyone even begin to inquire if he has no notion of the object of inquiry?'

[15] Sextus Empiricus, *Outlines of Pyrrhonism*: I. 115–17.

[16] Cf. *Science, Perception and Reality* (London and New York), p. 169, cited by Richard Rorty in *Philosophy and the Mirror of Nature* (Princeton: Princeton U. P., 1980), pp. 140–1.

[17] J. Woods and D. Walton 'Petitio Principii', *Synthese* **31** (1975), pp. 107–127. In this article the two authors introduce two broad types of circular conditions: '(1) the equivalence conception: an argument is said to be circular where the conclusion is tacitly or explicitly assumed as one of the premises, that is, where the conclusion is equivalent, or even identical, to one of the premises' (pp. 107–8) and (2) the dependency conception (p. 108) quoted above. They incline to believe that (1) may be just a special case of (2) (p. 109), and, in an epistemological context such as the present, a loosening of the isomorphic relation between premiss and consequence and therefore the reduction of (1) to (2) seems to be almost inevitable.

[18] J. Woods and D. Walton, 'Circular Demonstration and Von Wright-Geach Entailment', *Notre Dame Journal of Formal Logic* **20** (1979), 768–772, quotation from p. 769.

[19] This was already Aristotle's position, cf. *De Sophisticis Elenchis*, 165b. 25.

[20] J. Woods and D. Walton, 'Petitio Principii', p. 122.

[21] There is general agreement on this point among philosophers: cf. H. Palmer, 'Do Circular Arguments beg the Question?', *Philosophy* **56** (1981), pp. 387–394, esp. the references given in note 1 and K. Wilson, 'Circular Arguments', *Metaphilosophy* **19** (1988). pp. 38–52.

[22] Cf. for example what Popper refers in 'Die beiden Grundprobleme der Erkenntnistheorie' ed. by J. C. B. Mohr (Tubingen, 1979). The confusion arise in L. Nelson *Progress and Regress in Philosophy, From Hume and Kant to Hegel and Fries*, ed. by J. Kraft, trans. by H. Palmer (Oxford: Blackwell, 1971): II vol, 157–245 and in 'The Impossibility of the "Theory of Knowledge"', Eng. trans. in *Socratic Method and Critical Philosophy, Selected Essays*, trans. by Thomas K. Brown III (New York: Dover, 1965) [first pub. in 1912], p. 189. Two other examples are Petri Danielis Huetii Episcopi Suessionensis Designati *Censura Philosophiae Cartesianae* Paris 1689 caput quartum, X (p. 135) who defines the Cartesian circle as 'asyllogison'

[asyllogiston?] that is illogical or formally invalid, and Karl Otto Apel, who in 'The problem of Philosophical Fundamental-Grounding in Light of a Transcendental Pragmatic of Language', p. 240, writes that the *petitio principii* contained in Albert's 'Münchhausen's trilemma' is logically faulty.

[23] I have taken the image from W. W. Hollister 'Conduct and the Circle', *Journal of Philosophy* **50** (1953), 57–69, who uses the iconography of the spiral within the context of the discussion of patterns of vicious circularity of events, in order to convey a general sense of reinforcement of the circular structure.

[24] The idea of an abstract subject could be compared to the similar notion of 'abstract person' in Law, but for the demands of this paper the specifications given in the text are sufficient.

[25] Cf. W. Alston, 'Epistemic Circularity', *Philosophy and Phenomenological Research* **47** (1986), 1–30. Alston's epistemological essays are now collected in *Epistemic Justification* (Ithaca-London: Cornell U. P., 1989). The point is emphasized also in Barnes, *The Toils of Scepticism*, pp. 31–35. For a similar distinction cf. Apel, 'The problem of Philosophical Fundamental-Grounding in Light of a Transcendental Pragmatic of Language', pp. 248–9.

[26] W. Alston, 'Level-Confusions in Epistemology', in *Studies in Epistemology* (Mineapolis: Midwest Studies, 1980), pp. 135–150, quotation from p. 148. It is worth noticing that in the article Alston is concerned with the analysis of beliefs of a subject S, endorsing a classic Cartesian orientation within which he may not be interested in objection^{L4}; on the other hand, on p. 147 he quotes Sextus Empiricus' *diallelus* (*Outlines of Pyrrhonism* II. 20) as a clear formulation of the problem he is discussing in that section of the article, and I have shown in 'The Problem of the Justification of a Theory of Knowledge: Some Historical Metamorphoses', *art. cit.* that the *diallelus* is the classic source of the formulation of objection^{L4} in the history of epistemology. A recent example of the subtle level reached by the debate on the nature of justification, foundationalism, coherentism, reliabilism and Gettier-type definition of knowledge which is strictly connected to Alston's position is given by the discussion between David Shatz ('Foundationalism, Coherentism and the Levels Gambit', *Synthese* **55** (1983), 97–118) and James A. Keller ('Foundationalism, Circular Justification and the Levels Gambit', *Synthese* **68** (1986), 205–212).

[27] Because of the reference to 'what could be the actual case' the attempt of enlarging the fruitfulness of the dichotomy from L^1 to L^3 leads to another version of the Cartesian circle (see [28]): of course *if* there is a veridical God I am justified in trusting my clear and distinct ideas. But such a possibility is not sufficient to show that in fact I am justified, and to leave it undecided is equivalent to leaving undecided whether or not a proposition, which is certain in the internal world of my consciousness, is also true with respect to the external world of the universe. Hence, if I want to defend the identity 'certainty = truth' I should be able to demonstrate that there is such a God, but if I ground the demonstration of his existence on my clear and distinct ideas I am caught in a circle.

[28] Schlick, *op. cit.* , p. 118.

[29] Popper, *The Logic of Scientific Discovery*, chap. 5.

[30] A similar position is taken by R. Chisholm, *Theory of Knowledge* (Englewood Cliffs, N. J. : Prentice-Hall I.e. 1977), p. 121.

[31] *Mutatis mutandis*, this is the same problem faced by Quine's epistemology naturalized. According to Quine, the sceptic cannot adopt an external point of view from which to unhinge the whole body of our knowledge, for he is on Neurath's raft together with the scientist. But, as Barry Stroud has rightly pointed out (cf. above note 13), the sceptical challenge does not have to be global in order to be completely destructive: it can be progressive, in terms of an internal *regressus* of destruction of all the bits of our knowledge. As Sextus Empiricus well knows, that scepticism is self-defeating is not an argument against scepticism itself, but a further proof that any form of dogmatism is untenable.

[32] Cf. Lakatos *art. cit.* , p. 10.

[33] For a similar "deontological turn" of Chisholm's Cartesian internalism, see Alvin Plantinga 'Positive Epistemic Status and Proper Function', in *Philosophical Perspectives, 2 Epistemology*

1988, ed. by James E. Tomberlin (Atascadero, CA: Ridgeview P. C., 1988), pp. 1–50, first section.

[34] Sextus Empiricus, *Outlines*, I. 1–4.

[35] Sextus Empiricus, *Outlines*, I. 8

[36] Sextus Empiricus, *Outlines*, I. 52 and II. 325.

[37] In its ethical development, the form of falsificationism I have sketched joins forces with the contemporary interpretation of the notion of justification in deontological terms which has recently won a rather wide consensus among analytic philosophers. The fact may not be casual: both traditions have inherited the problems in the matter of justification left unresolved by the traditional theory of knowledge.

[38] Cf. Alston, 'Epistemic Circularity', p. 24. As is clear from this paragraph, I largely agree with the analysis of the problem given by Alston in this article, although I would follow Roderick Chisholm and Jonathan Barnes in stressing that the metatheoretical circularity apparently underlining any theory of knowledge is one of the most important problems faced by epistemologists, one which requires a solution as radical as the sceptical challenge.

[39] Cf. J. Elster, *Sour Grapes. Studies in the Subversion of Rationality* (Cambridge: Cambridge U. P., 1983), chap. II. Surprisingly, despite the large amount of references and examples, Elston does not mention the sceptical issue. See also P. Watzlawick, J. Helmick Beavin and Don D. Jackson, *Pragmatic of Human Communication, A Study of Interactional Patterns, Pathologies and Paradoxes* (New York: Norton, 1967), chap. 6.

[40] An interesting introduction to the problems connected with self-reference in the social sciences is given by Bruna Giacomini in *Conoscenza e Riflessività* (Milano: Franco Angeli, 1990).

[41] It is defined *catch-22* "a supposed law or regulation containing provisions which are mutually frustrating, a set of circumstances in which one requirement, etc., is dependent upon another, which is in turn dependent upon the first" (*Oxford English Dictionary*). The expression has become common in American English after it appeared as the title of Joseph Heller's novel *Catch 22* (1961), where we read that: "There was only one catch, and that was catch 22 ... if he flew them [more missions] he was crazy, and didn't have to, but if he didn't want to then he was sane and had to."

[42] An important difference should be made explicit here. Obviously the School of Palo Alto stresses the importance of the positive results obtained, i.e. the number of patients cured. Such a pragmatic orientation, thoroughly justified in the context of psychotherapeutic practices, makes Paul Watzlawick John Weakland and Richard Fisch emphasize the fact that their 'indirect approach' disregards any investigation into the psychological causes that motivate a certain pathological behaviour. They do not search for an 'insight' into the reasons which have provoked such behaviour; they are satisfied by the individuation of the possible, indirect modification of the situation which allows the disappearance of the problematic behaviour. Therefore, they generally speak of *changes* or *reformulation* of problems rather than *solutions* to them. Evidently, the purely theoretical context within which the debate over objection$^{L^4}$ takes place renders this pragmatic approach unsatisfactory (it is to be interpreted as the situation occurring at L^1 and so well described by Alston: we are still in the situation of knowing, although we do not know why we know. The fact that we know is not yet a solution to our problem, although, *mutatis mutandis*, it would be a 'solution' from the therapeutic point of view). To give a concrete example, the pragmatic approach would not consider a transcendental solution as a possible option, since the latter should be considered under the heading of 'search for insight'. This explains why I do not follow these authors in their suggestion that all indirect solutions (change of second type) are in one sense or the other inversions of *other previous solutions* (changes of first type), cf. P. Watzlawick, J. Weakland and R. Fisch, *Change – Principles of Problem Formation and Problem Solution* (New York: Norton, 1974), *passim*.

[43] Rorty, *op. cit.* , p. 140–1.

[44] A similar objection has been raised by Barry Stround against Quine's Naturalized

Epistemology, see note 13 above.

[45] Nicholas Rescher, *Scepticism* (Oxford: Blackwell, 1980) and A. C. Grayling *The Refutation of Scepticism* (London: Duckworth, 1985). It is worth remarking that both authors reconstruct the sceptical theses following more Wittgenstein, Moore and Hume than Sextus Empiricus. This enables them to adopt both a linguistic-transcendental translation of Wittgenstein's refutation of scepticism (introduced in *On Certainty*) and a 'naturalization' of Hume's abandonment of scepticism.

[46] L. Kolakowski, *Husserl and the Search for Certitude* (New Haven and London: Yale U. P., 1975): 78 and ff.

[47] In fact Descartes has one more weapon in his hands, the ontological argument, which should provide that bridge between certain thought and the most real of all realities; see Henri Gouhier, 'La Véracité Divine dans la Meditation V', in *Les Etudes Philosophiques* 2 (1956), 296–310. After Kant, the 'solution' is not easily acceptable. However, Hegel's appreciation of the same argument is indicative of the 'internalist and subjective' orientation of his and Descartes' philosophy.

[48] Cf. G. W. F. Hegel, 'On the Relationship of Scepticism with Philosophy', in *Sämtliche Werke*, ed. by H. Glockner (Stuttgart: 1927–40): vol. I, 215–75. Eng. trans. in *Between Kant and Hegel*, ed. by G. Di Giovanni and H. S. Harris (New York: Suny Press, 1985), pp. 311–62; and 'Glauben und Wissen, oder die Reflexionphilosophie der Subjektivität in der Vollständigkeit ihrer Formen, als Kantische, Jacobische und Fichtesche Philosophie', in *Jenaer Kritische Schriften*, hrsg. von H. Buchner und O. Pöggeler, *Gesammelte Werke*, hrsg. im Auftrag der Deutschen Forschungsgemeinschaft, Bd. IV (Hamburg: Felix Meiner Verlag, 1968), pp. 315–414, see esp. p. 326.

[49] Laurence BonJour, *The Structure of Empirical Knowledge* (Cambridge Mass. : Harvard U. P., 1985).

[50] Cf. B. Bianco, *J. F. Fries - Rassegna Storica degli Studi (1803 1978)* (Napoli: Bibliopolis, 1980), p. 32, and E. Cassirer *Philosophie der symbolischen Formen III, Phänomenologie der Erkenntnis* (Oxford: Bruno Cassirer, 1923), chap. IV, sect. 3. Note that David Hilbert supervised Nelson's thesis of qualification in Goethingen.

[51] Cassirer, *Philosophie der symbolischen Formen III*, 'Einleitung' p. 48.

[52] See G. W. F. Hegel,, *Lectures on the Philosophy of World History*, trans. by H. B. Nisbet (Cambridge: Cambridge U. P., 1975), p. 42.

[53] Popper's anti-justificationism has been differently compared to Wittgenstein's, cf. Jacob Joshua Ross, 'The Tradition of Rational Criticism – Wittgenstein and Popper', *Proceedings of the Third International Wittgenstein Symposium*, August 1978, pp. 415–19, who is in favour of the comparison, and William Warren Bartley III, 'Non-justificationism Popper vs. Wittgenstein', in *Proceedings of the Seventh International Wittgenstein Symposium*, August 1982, pp. 415–19, who criticizes Ross' position. On Wittgenstein's position with respect to the debate over foundationalism vs. coherentism, see also Roger A. Shiner, 'Wittgenstein and the Foundations of Knowledge', *Proceedings of the Aristotelian Society*, **8** (1977), 103–124.

[54] I have argued in favour of the possibility of an indirect, transcendental approach in 'Il Problema della Giustificazione di una Teoria della Conoscenza', *La Rivista di Filosofia*, **81**. 2 (1991), 319–35. Other studies in favour of an indirect solution have been developed by Leonard Nelson in *Progress and Regress in Philosophy, From Hume and Kant to Hegel and Fries*, vol. II, *passim*; by N. Rescher in *Methodological Pragmatism* (New York: New York U. P., 1977): esp. the second chapter which presents a type of pragmatic, indirect solution;, and by R. P. Amico in 'Skepticism and the Problem of the Criterion', a paper presented to the 1991 Pacific Division Meeting. Noteworthy also is the essay by Vittorio Hoesle 'Begründungsfragen des objektiven Idealismus' in *Philosophie und Begründung*, Forum für Philosophie, Bad Homburg (Frankfurt: M. Suhrkamp, 1987), Italian trans. by Giovanni Stelli (Milano: Guerini e Associati, 1991). Although he shares in large part the analysis conducted in this essay, as indicated by the title, Hoesle attempts to revaluate a form of strong objective idealism which differs from the approach informing the present work.