

## On interrogation<sup>1,2</sup>

(Da interrogação)

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*“The significance of a question is represented by the method for determining if an assertion is a complete and direct response to that question.” (Hamblin, 1958)*

*ABSTRACT: Studies on interrogative forms of discourse are an interesting matter for researchers of different fields. Psychoanalysts, philosophers, linguists, natural sciences researchers, all of them make frequent use of interrogatives in their work. Paradoxically the theoretical foundation of questions is almost absent in the literature, with the exception of some philosophical and linguistic studies. Probably the most contradictory field regarding questions is psychoanalysis, because psychoanalysts present an attitude that refuses to study questions although they frequently use interrogatives in their therapeutic dialogues.*

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<sup>1</sup> This study is dedicated to Prof. Circe Cunha for her work for the Catholic University of Pelotas.

<sup>2</sup> Study developed with support from NUPPLAC—Research Center on Psychoanalysis and its Applications.

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*The aim of this essay is to construct a theory for interrogatives, fundamentally basing our consideration on logical-philosophical and linguistic investigations. Recent developments in these fields permit the elaboration of some theoretical constructs specially founded in non-consistent logics, such as fuzzy logic, which open a new field for research on interrogation with consequent developments in clinical and theoretical bases. The conclusion reached is that psychoanalysts and other researchers should be interested in the subject.*

*RESUMO: Diferentes campos de investigação interessam-se pelas formas interrogativas dos discursos. Psicanalistas, filósofos, lingüistas, pesquisadores das ciências naturais, todos eles fazem uma freqüente utilização de interrogações em seu trabalho. Paradoxalmente, os fundamentos teóricos da pergunta são quase ausentes na literatura, com exceção de alguns estudos filosóficos e lingüísticos. Provavelmente o campo mais contraditório a esse respeito é o da psicanálise, porque os psicanalistas apresentam uma atitude de recusa para estudar a pergunta, ainda que eles a utilizem freqüentemente em seus diálogos terapêuticos. Este ensaio tem o objetivo de buscar construir uma teoria para as interrogações, fundamentalmente baseando nossas considerações nas investigações lógico-filosóficas e lingüísticas. Recentes desenvolvimentos nesses campos permitem elaborar alguns construtos teóricos, especialmente apoiados nas lógicas não-consistentes, como a lógica "fuzzy", a qual abre um novo campo para investigações sobre a pergunta, com conseqüentes desenvolvimentos em bases teóricas e clínicas. Há, conclui-se, um interesse psicanalítico e de outros campos nesse assunto.*

*KEY WORDS: questions, theory, philosophy, linguistics, logic, psychoanalysis.*

*PALAVRAS-CHAVE: perguntas, teoria, filosofia, lingüística, lógica, psicanálise.*

## INTRODUCTION

It is surprising that **{TC \II "Introduction}** psychoanalysts have a contradictory attitude regarding the use of questions in their therapeutic dialogues. Two opposite phenomena are present in their contradiction: (a) they frequently use questions in therapeutic dialogues, (b) there is a lack of interest in (a).

This paradoxical behavior has led to researchers and clinicians not being very interested in stressing questions as an important and special form of verbal communication, with its own peculiarities: its intersubjective conditions and consequent dialogical processes and therapeutic outcomes. This misleading psychoanalytical attitude places questions in a shadowy field. Nevertheless, it is possible to point out an opposite perspective originated in neighboring fields to psychoanalysis, such as this quotation from a linguistics researcher emphasized: “l’interrogation est devenue aujourd’hui un *phénomène central de préoccupation théorique* dont se sont emparées la linguistique, la logique, la philosophie, la psychologie et même l’anthropologie. Certains n’hésitent pas a considérer le questionnement comme une réalité fondamentale de l’esprit humain, sur laquelle les autres dimensions viendraient s’articuler” (italics added). These are the opening remarks of a work that Meyer (1981, p.3) presents in a

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whole issue of the review *Langue Française*, specifically focusing the questions as object of study. This author stressed the necessity for finding a full theory of questioning, and the need for new theoretical support for rational thinking, with special emphasis in the “couple question-answer” (p.3). Nowadays a shift in research direction is observed in the old fashioned linguistic (and psychoanalytic) concept that questions are “des êtres linguistiques sans valeur de vérité” (Meyer, 1981, p.3), and, as a consequence, research was until the present time, only directed to affirmative propositions, or statements, of discourse. With the advent of postmodern thought we are now able to consider the conditions for the beginning of a real *erotetic logic* – to use the Greek word *erotesis* that means interrogation.

In the following pages the reader will find the authors’ theoretical considerations – with an emphasis on philosophical researchers – regarding the “*erotetic commitment*” (Meyer, 1981, p.96) present in verbal forms of communication, followed by psychoanalytical considerations regarding possible interest of clinicians and theoreticians in that point of view.

A previous study on the subject *questions* was recently published by the authors (Sousa, Silva, Pinheiro, 2000). The present presentation focuses a wider approach to interrogative acts in different domains of a variety of dialogues with contributions from Linguistics, Philosophy, and Erotetic Logic.

Almost a century ago logician Felix Cohen (1929) in a seminal article entitled *What is a question ?* remarked that “ ‘what is a question ?’ is a question which seems to have been almost totally ignored by logicians. The problem, however, is about as important for rational thought as

the more common inquiry into the nature of propositions, assertions, or judgments. And if the former inquiry does, in its claim to significance, presuppose a solution, so too does the answer to the latter. That is to say, in order to answer the former question we must assume that it is a question, just as we must assume that any real definition of a proposition is a proposition". . . "if our question can be answered, the ultimate value of such a solution to philosophy must be considerable" (p.350).

Analogous assertions can be made from different points of view. For instance, philosophers and psychoanalysts would be interested in the studies of the intrinsic communicational nature of a question and the interpersonal nature they represent which could be operative in dialogues. Our aim in this essay is to introduce some theoretical and philosophical perspectives, especially from a logical point of view, which may be contributory to further understanding of the nature of questions in ordinary and therapeutic dialogues.

#### LINGUISTIC REMARKS

Anything we say or write is always a question regarding something, and we are always aiming to answer this problem, although we may realize this fact questions exist only in an *après coup*. Language is a kind of response to this and as such, a kind of rationality in treating them, i.e., an effort to reach a solution, if this is present in the act of communication.

Interrogation provides a linguistic model of rationality and simultaneously an outline of a possible deep structure of discourse. In linguistic research it is observable that

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interrogation may usually appear in an interrogative sentence, but it is not only present in this form of communication. We all remember some examples of interrogative sentences where affirmation, although disguised, constitutes the structural sense of the interrogation. This kind of question does not demand an answer, but these sentences are still interrogations, in a rhetoric or argumentative way. It is remarkable that explicit interrogation may suggest hidden conclusions without openly saying so. Therefore, questions generate the necessity to think (Meyer, 1981).

Reality is never perceived as a closed totality. Each time we want to explore reality we need to choose what is our interest among all coexisting possibilities. This is the only way to assess it. Interrogations may be seen in this context as a “knowledge operator” that allows us to arrive at the final propositions to be externalized.

One of the fundamental properties of interrogation we want to stress is that an interrogative sentence may function as an expression of command (“Would you please keep quiet?”) and also as an affirmation (“Who does not know that interest separates us whereas intelligence bring us together?”). This perspective points out that the linguistic comprehension of interrogation is beyond an exclusive theory of syntax. To ask means the utilization of different linguistic acts with the aim of a certain task: “to ask, is questioning” (“*interroger, c’est questionner*”) (Apostel, 1981, p. 23). As speech acts, questions present different forms of action: (a) it is an interpersonal act that may influence all the persons involved in the dialogue (a model of “dual” interrogation); (b) it involves an effort to change something (e.g., to bring forth a response); (c) it implies a reciprocal adaptation of different and independent systems, i.e., the interlocutors involved; (d) it has deducible

presuppositions linked to certain assertions as true utterances.

EROTETIC LOGIC  
AND SOME THEORIES OF INTERROGATION

In this section we will present a general view on the thoughts of contemporary philosophers regarding questions. Of course this is not an exhaustive revision. Our aim is only to select some theoretical propositions that seem to allow a wider discussion regarding some conventional psychoanalytical positions, strongly understood as evidence-based knowledge.

Let us start with Felix Cohen, a pioneer in the field, with his seminal essay from 1929.

*Felix Cohen*

After the well known Socratic propositions about his “question method”, the oldest investigation we know on this subject is the logic study from Cohen (1929). “A question is not simply a psychological provocation” (p.351), he stated, in the sense that one of the significant values of questions is that they lead to judgments, in the same manner as judgments are valuable because they lead to inquiries. But, the author alerts us to the fact that it will be superficial if we remain with the ethic that “regards thinking as wholly pragmatic and concludes that the question is the beginning of thought, important only as an instrument for attaining the end of thought, the judgment” (p.351). Such thoughts are at the base of the indifference of philosophers to questions and their exclusive interest with propositional formulations. With this logical position

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Cohen remarks that there is a whole “virgin field” ready for the study of questions.

The logician points out the following topics on the subject: (a) a question is, generally, a request for information, but, of course, rhetorical questions are a relevant exception, in the sense that a question is asked without an intention of receiving an answer; (b) there are questions without answers, e.g. “what is the largest number?”; (c) the propositions above do not give us information about the nature of a question; (d) Cohen is in opposition to the common view that a question is an ambiguous assertion, in the sense that “since every proposition is either true or false therefore no question is true or false” (p.352); (e) questions are logical entities and not simply a psychological event or a physical object. “Logicians distinguish between a statement (or judgment or declarative sentence) and a proposition (or assertion). The one is a human act or a symbol; the other, a logical entity, a meaning. But the word *question* (Cohen’s italic) is used indiscriminately to refer on the one hand to the act of questioning or the verbal symbol, and on the other hand to the content of thought, the meaning that is entrusted to, and communicated by, a conventional language sign . . . we shall therefore use the word *question* to denote exclusively the logical entity, and refer to the act or symbol embodying this as an interrogative sentence” (p.353).

Cohen stressed that questions are neither true nor false, while answers (as values of questions) are true or false. In everyday speech *who*, *which*, *what*, *when*, *where*, *why*, etc. are “real” or “apparent” variables: *real* when they “appear in the role of interrogative pronouns or adjectives” (p.354); *apparent* “when they are termed relative pronouns or adjectives” (p.354).



What is a significant question? What is the correct answer? These questions lead to the concept of *interrogatory significance* (p.359) and the basis of the idea is that it is a question to which some proposition is *the* true answer. There are two conditions for a significant question: (a) there must be at least one true proposition that is a value (answer) of the given propositional function, (b) there must be not more than one such proposition. If a question violates the first condition it will be called *invalid*, e.g. “what cat has eight lives?” (the correct answer is “no cat has eight lives”); if a question violates the second condition it will be called *indeterminate*, e.g., “who did what when?” is indeterminate and non-significant.

Finally, the main logical idea Cohen stressed in the study refers to frequency and danger of *ambiguity* and *level of complexity* as much in interrogations as in statements. He finished his argument quoting Whitehead and his hope that we shall find real propositions in the kingdom of Heaven. Cohen also said “there too shall we find real questions” (p.362).

### *Hans-Georg Gadamer*

Gadamer’s (1975) hermeneutic interest was pervasive in his study on questions. Basing his considerations on the model of Platonic dialectics and on the logic of question and answer, he attempted to find the essence of the question.

In item 351 of *Truth and Method* (1975; Portuguese translation, 1999) he starts with a very disturbing Sophistic question: *how can we ask about something that is unknown?* Gadamer stated that his Sophistic objection, carried out by Plato (in *Menon*) could only be overcome by

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using the myth of a preexisting soul. Only appealing to some spiritual instance could it be possible to overcome the argument held in that question. But he points out that the myth belongs to a pedagogic strategy and, according to the Hegelian thought, it is useless as a foundation of philosophy in the modern era.

In the next step of Gadamer's analysis (items 351 to 368, especially pp. 333-341) questions are examined in the context of experience. One main topic states that all experiences we carry out transform our knowledge, leading us systematically to new experiences. In reality we are talking of true experiences and "the truth of experience always holds new experiences as references" (p.525). In that context an expert is a self-made person who made him/herself through experience *and* remained open to new ideas. As a consequence, an expert would be the least dogmatic of all humans, based on the dialectics of experience and being far from any kind of consummate knowledge.

After an analysis in depth of the meaning of experience, stressing, among other aspects, the relation between pain and experience, Gadamer (item 305) mentioned Aeschylus' thought which claims to realize the generalized short-sightedness of human beings and the limitation of human foresight, so widely linked to the general experience of pain. This idea is summarized in the following saying: "Those who don't listen, must feel" (p.526).

### *The Platonic dialectics and the essence of the question in Gadamer's view*

The Socratic *docta ignorantia* emphasizes the superiority of the question in the search for truth. This means

that extreme negativity – being open to new experiences – is found in real questions. Such concepts make it clear that the structure of the question is presupposed in all experiences, in other words, experience is not carried out without the activity of questioning. To know if something is “this way” or “that way” is a condition that is deeply linked to the structure of the question. The logic form of the question, and the negativity that is inherent to it, find its consummation in the most extreme situation of negativity synthesized in the expression: to know that you don’t know. That is why to ask is much more difficult than to answer, as presented in the Platonic Socrates, meaning that a question is a sign that you want to know, and, therefore, that you really do not know.

A question must have a meaning, a sense of orientation that leads to some form of rupture for the listener. In this perspective, the *logos* developed by the listener is already an answer whose meaning only makes sense in the sense of the question. These are reasons why dialectics is carried out in the modeling of questions and answers, in other words, all knowledge passes through the structure of the question. Consequently, the sense of any question is only carried out if the question passes a zone of deferment in which the question acquires its opening condition. It is the *sine qua non* for the authenticity of a question, to realize that facing a question we are open to the troublesome condition that there is no fixed answer. Examples of non-authentic – pseudo-questions – are the pedagogic (with its lack of someone to ask) or the rhetoric (lacking the real question) questions.

But the opening of a question cannot be unlimited. It must be present at a certain level of limit for adequately placing the questions. This placing simultaneously presup-

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poses an opening and a limitation, i.e., it must show what is really questionable and remains in the domain of an open condition. Otherwise the question is false. Some examples of this falsehood are the tortuous questions, so common in the everyday life. Tortuous questions mean that they have lost their original orientation, to point out the opening condition of knowledge. They are, then, neither completely false nor completely correct, and as a consequence they have no answers.

*Lennart Aqvist & Jaakko Hintikka*

From the point of view of an action, the logic of interrogations lead us to the conception that an interrogation is not essentially a linguistic activity, although it is expressed frequently through language. If the action of interrogation is carried out through the tool-question, the interrogation is different from the question, as an assertion differs from a proposition. Natural language provides the expression of the *interrogation* because natural language is the medium in which we make attempts to augment our knowledge and/or our power. The logic of the *question*, on the contrary, is carried out through formal language.

Although Aqvist (1965, 1971) and Hintikka (1976, 1981), and Belnap & Steel (1976) have presented similarities in their theoretical approaches to the erotetic logic, some significant differences should be identified. Whereas to Belnap and Steel a question is primarily an identity providing linguistic expression, linked to a first order functional calculus, to Aqvist and Hintikka it is the same, except that a question is a statement enriched by different epistemic modalities (such as “knowledge” or “belief”) and several imperative contents. Hintikka’s example (p.22)

may provide some clarity on this topic: “Who lives here?” is a question with two parts - an imperative content (“I know that someone lives here”) and an object that carries the imperative (a knowing state “I know who lives here”). The propositional questions (an example could be “Will an eclipse of the moon occur tonight?”) propose a finite alternative. On the other side, the *Wh-questions* (named “categorical questions” in some Latin languages; “What is the degree of water condensation?” is an example) *do not* propose finite alternatives. These are represented by propositional functions through which the inquiry demands that the questioner give one or all the individual constant parameters establishing the true function.

*N.D. Belnap and T.B. Steel*

As we saw, Belnap & Steel developed their erotetic logic as a part of a functional calculus of first order (which means a logical operation) with the presence of an identity, but without the inclusion of imperative categories or epistemic modalities. They believe that an interrogation is an attempt to obtain a direct response. This direct response is a reply to the question that carries out the desired task exactly, nothing more, and nothing less. It should be stressed that Aqvist and Hintikka do not include in their conceptualization this notion of direct answer. To Belnap-Steel, nevertheless, it is a central notion. The direct answer is a linguistic act, in their thought, that could be expressed as an equation: “*?es*”, where *e*=enquire, and *s*=the subject of the enquiry.

Both theoretical contributions, that from Aqvist-Hintikka and the other from Belnap-Steel, have been criticized by Apostel (1981). Succinctly, Apostel pointed out

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that a variable is not available if, metaphorically, its domain of variation is undefined, as he presented in the Hintikka's example "Who lives here?". Regarding this question Apostel said that opposed to Hintikka's idea we could have different answers, such as a personal or an institutional name, and simultaneously, "here" could be identified by a complete house, or an apartment, or a room. In all these cases, he continued, the domains are well determined but we cannot, in advance, specify the domain of the variation of the variable.

Searching for a definition of the subject of the interrogation, Belnap-Steel (1976) were inspired by Hamblin's (1958) well-known maxim: "the significance of a question is represented by the method for determining if an assertion is a complete and direct response to that question" (p.160). This is one of the main topics that Apostel's (1981) criticism had stressed. For him, the significance of a question means (a) a method for generating replies or even partial responses, (b) a form of reformulation and adjustment of the initial question, considering the partial responses and replicas, (c) a partial method for determining the measure of acceptability (availability) of the partial responses. Apostel (1981) pointed out that contrary to the notion of direct answer, it is central to the notion of "*preferential order of the partial and indirect responses*" (p.34), meaning the dynamic choice of the more adequate interventions (responses and its influence in reformulating the question) in the dialogue.

This theoretical position postulated by Apostel (1981) opens a new way of examining the erotetic logic, because he takes into consideration that the enquiry has as components not only *one* form of questioning-answering, but, on the contrary, it presents *sets* of possible and rea-

sonable responses to such questions, meaning that a multiplicity of more *vague* responses must be considered from a logical point of view. At this level he quoted Zadeh's (1979) emphasis in the notion of "*fuzzy sets*" as a useful tool for logical analysis.

Apostel's emphasis is on the concept of questions as actions, and the fact that one action implies another as responses that, prospectively, modify the previous action, and so on.

Nowadays *Fuzzy Logic* is a new logic instrument with multiple uses in different fields of knowledge, linguistics included, as we will briefly examine in the next section.

#### FUZZY LOGIC AND THE LOTFI ZADEH'S PIONEERING WORK ON FUZZY SETS

Classical mathematics is characterized by what are usually called *crisp* sets, whose meaning is that between two real entities there are not any other possible entities. Let us consider, for example, a set of real numbers between 0 and 10. Each number between them could be differentiated by adding the unit number  $- 1 -$  to the preceding value. The whole set is a crisp set. Linear, or Boolean Logic usually evaluates its objects of study through a conventional measurement that permits the use of clearly defined dichotomy conditions, such as 0/10 numbers, yes/no responses, true/false statements, square/circle mathematical perspectives.

Fuzzy Logic, on the contrary, is essentially a multi-valued logic that allows *intermediate values* to be defined between such conventional evaluations. Originally Fuzzy

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Logic was an attempt to apply a more human-like way of thinking in the programming of computers. This nonlinear logic system was initiated in 1965 by Lotfi A. Zadeh, professor of computer science at the University of California in Berkeley.

Let us summarize the main concepts on the subject and its possible application in the study of the questions/answers sets.

Nonflexibility of linear logic may not be suitable for the analysis of very complex systems, although it is a kind of logic apparently more easily understandable. Let us illustrate the problem. In this example we want to describe the set of young people. More formally we can denote

$$B = \{\text{set of young people}\}$$

Since in general age starts at 0 the lower range of this set ought to be clear. The upper range, on the other hand, is rather hard to define. As a first attempt we set the upper range at, say, 20 years. Therefore we get  $B$  as a crisp interval, namely:

$$B = [0,20]$$

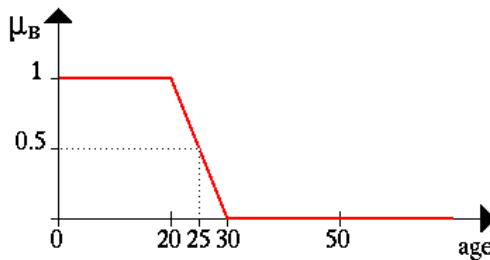
Now the question arises: why is somebody on his 20th birthday *young* and on the following day *not young*? Obviously, this is a structural problem, for if we move the upper bound of the range from 20 to an arbitrary point we can pose the same question.

A more natural way to construct the set  $B$  would be to relax the strict separation between *young* and *not young*. We will do this by allowing not only the (crisp) decision *YES he/she is in the set of young people* or *NO he/she does not belong very closely to the set of young people* but more



flexible phrases like *Well, he/she belongs a little bit more to the set of young people* or *NO, he/she almost doesn't belong to the set of young people*. As a concluding remark, it could be stressed that a 25 years old would still be *young* to a degree of 50 percent, as it can be easily understood in a graphical construction, as seen in Figure 1.

Many problem-solving tasks, such as question-answer sets discussed in groups, are too complex to be understood quantitatively; however, people succeed by using knowledge



that is imprecise rather than precise. Nevertheless, decisions must be taken and many of them are vital. Thus the importance of nonlinear logical studies. It was specifically designed to mathematically represent uncertainty and vagueness and provide formalized tools for dealing with the imprecision intrinsic in many problems, such as artificial intelligent (AI) devices or the comprehension of human dialogues. By contrast, traditional logic used in computing demands precision down to each detail. Fuzzy set theory implements classes or groupings of data with boundaries that are not sharply defined (i.e., fuzzy data). Any methodology or theory implementing "crisp" defini-

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tions such as classical set theory, arithmetic, and programming, may be "fuzzified" by generalizing the concept of a crisp set with a fuzzy set having blurred boundaries. The benefit of extending crisp theory and analytic methods to fuzzy techniques is the strength in solving real-world problems, which inevitably entail some degree of imprecision and noise in the variables and parameters measured and processed for the application. Accordingly, linguistic variables are a critical aspect of some fuzzy logic applications, where general terms such as "large," "medium," and "small" are each used to capture a range of numerical values. While similar to conventional quantization, fuzzy logic allows these stratified sets to overlap (e.g., a man weighing 85 kilograms may be classified in both the "large" and "medium" categories, with varying degrees of belonging to or membership of each group). Fuzzy set theory encompasses fuzzy logic, fuzzy arithmetic (fuzzy numbers), fuzzy mathematical programming, fuzzy topology, fuzzy graph theory, and fuzzy data analysis, though the term fuzzy logic is often used to describe all of these.

Fuzzy logic emerged into the mainstream of information technology in the late 1980's and early 1990's. Fuzzy logic is a departure from classical Boolean logic in that it implements soft linguistic variables on a continuous range of true values which allows intermediate values to be defined between conventional binary values. It can often be considered a superset of Boolean or "crisp logic" in the way fuzzy set theory is a superset of conventional set theory. Since fuzzy logic can handle approximate information in a systematic way, it is ideal for controlling nonlinear systems and for modeling complex systems where an inexact model exists or systems where ambiguity or vagueness is common.

As we saw above, in linguistic studies on questions (see Apostel's criticism to Aqvist-Hintikka and Belnap-Steel contributions), the notion of fuzzy (sub)sets is useful to analyze propositional questions (an example would be "How can I get to the airport?"), where the subject of enquiry will not be only one set but a multiplicity of sequential sets. These sets are composed for all the partial responses of sets of the fuzzy type. For Apostel (1981) to understand a question is not equivalent to knowing the complete response but it is equivalent to knowing the operations that increase the degree of completeness of the partial responses. As it was stated earlier in this article, Apostel's central idea pointed to the notion of *order of preference* of all partial and/or indirect responses, electing the ones more meaningful in relation to the question posed.

#### CONCLUDING REMARKS

1. *A contradiction.* If Psychoanalysis is understood to be more a search for truth than a mere therapeutic method – and, as such truth is believed to have an intrinsic therapeutic value – psychoanalysts could be seen as maieutic researchers, that is, pertaining therefore to the Socratic tradition. The Socratic way of questioning has maieutic properties that brings the interlocutor gradually closer to "delivering" his/her truths, related to him/herself and to the world where they live. Although everyone's final truths cannot be accessed throughout natural (human) procedures – such as consistent dialogues, or even "talk" therapies – it makes a significant difference if we are able to be, at least closer, to our own, and to other, truths. Thus,

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our first conclusion regarding this kind of argument is that psychoanalysts are *contradictory* when they put questions into a shadowy domain of therapeutic dialogue. This essay is, from that point of view, a concrete form of facing the challenge to create some theoretical bases for questioning in psychoanalytic dialogues.

2. “*The Tool Principle*”. As we start these final notes with the evidence of a contradiction, let us remain for a few moments more in a correlated field. With this aim in mind let us briefly examine Newton da Costa’s ideas. He is a Brazilian philosopher who developed the basis of para-consistent logic. Da Costa quoted Kaplan’s critical statement (in Kaplan’s *Behavior in Research*): “*give a hammer to a child and it will rapidly conclude that all things should be hammered*” (Da Costa, 1987, p.66, italics added). Da Costa’s objective is to criticize some euphoric attitudes that could grow up among researchers, starting from the notion that the new non-formal logics – such as temporal logics, deontical logics, *fuzzy* logics – would certainly be able to characterize the inferential-deductive net of complex systems such as psychoanalysis or linguistic communication. In this context our purpose is to stress that interdisciplinary *intentions* are not enough as legitimate research tools. As a consequence of a wild application of some paradigms of a particular field to another field of knowledge, may create *apparent* new knowledge that are actually artifacts. In our interdisciplinary studies on questions we have to be aware of that. We believe we are carefully and skeptically progressing in the field, and the consideration of non-formal logics when analyzing interrogative discourses appears to be a promising task. Meanwhile, more research is needed with the aim of un-

derstanding and formalizing patient's discourse in terms of non-consistent logics (Da Costa, 1993).

3. *Fuzzy logic and skeptical systems.* To investigate interrogative speech acts means to accept the co-existence of systems that have, simultaneously, incompatible logics. The split Freudian mental apparatus is an impressive example, where conscious and unconscious logics are simultaneous operators and widely, but not permanently incompatible. This last aspect means that on some special occasions both mental systems have, temporarily, the same logic. "Sometimes a cigar is a cigar", is a well known Freudian thought which illustrates the idea. This very dynamic variation of responses, related to an ample set of internal and external stimuli in constant evolution and different levels of interaction between them, appears to be a suitable group of changing phenomena to be addressed through a non-linear logic, such as fuzzy logic. As we remember, classical set theory may be "fuzzified" by generalizing the concept of a crisp set with a fuzzy set having blurred boundaries.

4. *Question as power.* As we remember, Cohen (1929) makes us aware that questions may be erroneously perceived as a simple "beginning of thought" (p.351), when, in a deeper view, questions should be understood as powerful tools in the determination of real, true senses in dialogues. He defended the idea of an "interrogatory significance" (p.359) as a useful concept for evaluating validity of questions in the processing of dialogues, stressing that in the same way it is difficult – or impossible – to elaborate *real* logical propositions, it is almost impossible to formulate "real questions . . . [only] in the Kingdom of

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Heaven” (p.362), illustrating the necessity to consider questions as another form of special – and powerful – propositions, with the potential power of inducing psychic change through dialogues.

In a parallel form, Gadamer’s (1975) views put questions into experience and stressed that they are a superior instrument in the search for truth. He then asserts that real questions are presupposed in all significant experience, naming this fact as the question’s power of extreme *negativity*, in the sense of staying permanently open to *new* experiences. He plainly understood, in a Socratic way, that questions show up ignorance and the experience of ignorance may be the impetus for further thoughts. That is why it is more difficult to ask than to answer, pointing out that besides imperfections and limitations of all human questions, questions push thoughts to new thoughts through evidence of ignorance.

Logical approaches from Acvist (1965, 1971), Hintikka (1976), Belnap & Steel (1976) and Apostel (1981) could be viewed as a consistent group of investigations that show up the operative conditions of powerful questions. Covering a variety of central notions regarding logical operations with questions, these authors, although having divergences among them, examine the power of questions as generators of complete answers, as well as their capacity for generating sets of more *vague* replies that must, still, be viewed as logical and pertinent sets of *fuzzy* responses, whose consideration open a wide field of investigation in a varied group of disciplines. Fuzzy logic, in this context, permits the construction of a new concept of *order of preference*, as formulated by Apostel (1981), that takes into consideration responses that are less precise than those admitted by formal logic. It is a way of reaching

postmodern scientific methods of investigation – specially strong in the so-called qualitative designs – that are situated beyond the domains of the dichotomic approaches of the older – but still alive – paradigms.

5. *Is there something of interest for psychoanalysts? And for other researchers?* To theorize is a human necessity. More than that: it is a human compulsion. The impossibility to observe reality without any kind of theoretical framework is, nowadays, widely accepted. And researchers are *permanent – maybe obsessive – question makers*. Thus, knowledge about questions is pertinent to all researchers, and possibly to all dialogically-related communication. The paradox of the presence of disinterest of researchers in their own questions, associated to the ubiquitous and permanent use of interrogations about reality by them, permits a not very new psychological discovery regarding questions: every significant question has a traumatic component for both questioner and listener. In conclusion: we can only follow in Socrates' footsteps.

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Recebido: setembro 2001

Revisado: dezembro 2001

Aceito: janeiro 2002

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